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SUMMARY OF THE COLLECTIONS OF SNAKES AND CROCODILIANS MADE IN MEXICO UNDER THE WALTER RATHBONE BACON TRAVELING SCHOLARSHIP

By HOBART M. SMITH

By aid of the Walter Rathbone Bacon Traveling Scholarship of the Smithsonian Institution, my wife and I were enabled to spend the greater part of two years, from September 1938 to August 1940, collecting reptiles and amphibians in certain areas in Mexico. The work was intended primarily to supplement other investigations I had conducted previously, but various opportunities were taken to augment the collection of the National Museum by brief visits to areas that had been formerly studied. We worked in several areas I had not visited before, and the unusual opportunity was offered to collect in numerous localities during the dry season. Practically all previous work had been done during the rainy season, when the active fauna is frequently much different from that of the dry season. Unfortunately, it was impossible to reach certain other critical areas included in the original itinerary, in spite of the very considerable length of time at our disposal. Even had we been able to do twice as much field work as was actually accomplished, the same statement probably could be made; Mexico will remain an extraordinarily fertile field for local studies for many years.

After our return the authorities of the Smithsonian Institution very kindly approved the continuation of the Scholarship until September 1941, to afford a much-needed respite from other duties for study of the collections secured. The simple task of sorting the

miscellaneous collection of over 20,000 specimens occupied almost one-tenth of this time. During the remainder of the year most of the snakes and lizards were briefly studied. According to original plan, a report on the entire collection was to be prepared, but circumstances have unduly delayed this. Rather than await its completion, the report will be issued in parts. This, the first, treats the snakes and crocodiles only.

The total number of snakes obtained is 1,319, representing 175 species and subspecies. Among these are about 25 new forms, most of them described in previous papers. Fifty-four are new to the Museum's Mexican collection. Examples of all three species of crocodiles known to occur in Mexico were found, including some 19 specimens; only one of these species was previously represented in the Museum's collection from Mexico.

While the following notes are based largely upon the specimens procured under the Bacon Scholarship, it has appeared desirable to record also other Mexican species (exclusive of Baja California) represented in the Museum, though these are not so thoroughly annotated as the specimens deserve. In all, 116 forms are thus added, making a total of 291 mainland Mexican forms—about three-fourths of the total ever recorded—represented in the United States National Museum. The specimens already in the Museum are listed after the Bacon specimens in the discussion of each species; species not represented in the Bacon collection have an asterisk preceding the name; and species in the Bacon collection that are not otherwise represented in the Museum's collection (or that are not represented by Mexican specimens) are indicated by a statement in the final paragraph of the discussion concerned. Three species of *Scaphiodontophis* have been omitted because of an unexpected delay in the publication of their descriptions elsewhere.

In several previous papers (see bibliography: Smith, 1939-1942g; Smith and Taylor, 1941; Taylor and Smith, 1942a, b) discussions or descriptions of certain specimens of the Bacon collection have appeared. These notes are not repeated here, but a reference to them is given in synonymy form for each species. References to more than nominal mention of other specimens in the U. S. National Museum are in footnotes.

OPHIDIA

ADELOPHIS COPEI Dugès

One specimen is in the collection, from Yautepec, Morelos (No. 110335). This has 143 ventrals, 53 caudals (male; 2 or 3 scales missing at tip of tail); 5 infralabials and supralabials; fifth supralabial

separated from parietal by an elongate temporal; otherwise as in neotype.

The Museum has no others.

The type is not now in existence, as Dugès (1887, p. 20) states, "No tengo en mi poder el cuerpo mismo del reptil, pero he conservado un cráneo en muy buen estado . . ." A specimen now present in the Dugès Museum, Guanajuato, is labeled "Cupátaro" (perhaps Tupátaro, Guanajuato) and is designated neotype. It may be described as follows:

Head not flattened, somewhat conical; portion of rostral visible from above narrow, but its length about two-thirds length of internasals; latter about a third broader than long, their length slightly less than half that of prefrontals; latter nearly twice as broad as long, extending onto sides of head between preocular and nasal, in contact with second and third supralabials; greatest width of frontal about three-fifths length of same; posterior angle of frontal nearly a right angle; sides of frontal slightly sinuous; greatest width of a supraocular slightly more than greatest width of frontal; greatest length of parietal one and one-half times the greatest length of frontal, their length about equal to their distance from tip of snout.

Nasal large, its length as great as its distance from orbit, the two separated from each other medially by a distance equal to half the greatest width of an internasal; nasal divided below naris (on one side there is an incomplete suture above the naris), the anterior moiety about half the size of the posterior; no loreal, the prefrontal in contact with labials; one preocular, twice as high as long; diameter of orbit about two-thirds its distance from rostral; pupil round; third and fourth supralabials entering orbit, the third narrowly; two postoculars, the upper about twice as large as lower, which is wedge-shaped; five supralabials, the last much the largest, its length nearly equal to length of others combined; fifth supralabial broadly in contact with parietals, bordered posteriorly by three scales.

Labial border of mental apparently slightly greater than that of rostral (a small injury on right side); five infralabials, the first in contact with its fellow medially; fifth infralabial as long as the third and fourth combined; two pairs of chin shields, the posterior slightly the longer and broader than anterior; three scales between chin shields and first enlarged ventral.

Scale rows 15-15-15; dorsal scales keeled, except those of outer two rows on each side; scales of first (outer) row broader than long, those of second row as broad as long and at least twice as broad as scales of inner dorsal rows; some of the scales appear to have two pits, but this cannot be determined because of the flabby character of

the scales (the original scales lost); ventrals 132; anal entire; caudals 54, divided, excluding the terminal spine; male.

The specimen has lost all its original scales; the ground color of the back is now light slate-gray; a narrow dark line originating at the posterior margin of the orbit passes posteriorly along the suture between the parietal and fifth supralabial (most of the stripe on the labial) and continues down the sides of the body on the third and fourth scale rows; it disappears completely just before reaching the anus; a median light line is very dimly visible, apparently occupying but one scale row posteriorly, wider on the neck; at present the stripe cannot be discerned on the tail.

Mental and gular region cream; dorsal color encroaching on edges of ventrals, which are otherwise gray-cream; the extreme anterior edge of each ventral is black, the color concealed beneath the posterior edge of the preceding ventral; the extreme anterior edges of most of the dorsals are black, particularly on the scales of the first and second rows; ventral surface of tail somewhat more cream-colored than belly.

Length of head, parietal to rostral, 8.5 mm.; total length, 252 mm.; tail, 53 mm.

The specimen is in excellent condition except for the loss of the original scales and a slight injury in the mental region.

*ADELPHICOS QUADRIVIRGATUS SARGII (Fischer)

The Museum has four¹ from Mexico, three (Nos. 46612, 46614-5) definitely from Chicharras, Chiapas, and one other (No. 46514) probably from that locality.

ADELPHICOS QUADRIVIRGATUS VISONINUS (Cope)

Adelphicos quadrivirgatus visoninus SMITH, Proc. Rochester Acad. Sci., vol. 8, pp. 186-188, figs. 2, 6 (map), 1942.

A single specimen (No. 109706) was found near Palenque, Chiapas, in a rotten log.

The Museum has no others from Mexico.

*AGKISTRODON BILINEATUS Günther

The Museum has seven specimens, from María Madre Island, Tres Mariás Islands (No. 24685)²; Tehuantepec, Oaxaca (No. 30492); Los Reyes, Michoacán (No. 46416); and "Mexico" (Nos. 32214, 84055, 85093-4).

¹ Smith, 1942c, pp. 192-195, figs. 4 (ventral head scales), 6 (map).

² Stejneger, 1899, p. 71.

AMASTRIDIDIUM SAPPERI (Werner)

One specimen (No. 110334) is from Las Nubes, Cerro Ovando, Chiapas (2,500 feet). Ventrals 165; anal divided; caudals 70+ a few; female; 7 supralabials, third and fourth entering eye, fourth and fifth narrowly in contact with parietal; loreal and preocular fused, but outlines clearly indicating two scales; one postocular. Light area on posterior part of head reddish.

The specimen was found hidden in gravel through (not over) which water trickled, among boulders in a stream on a steep slope.

The Museum has one other (No. 46509),³ from Chicharras, Chiapas.

**ARIZONA ELEGANS OCCIDENTALIS* Blanchard

The Museum has two Mexican specimens, one (No. 14298)⁴ from "Chihuahua" and the other (No. 46374) from Casas Grandes, Chihuahua.

BOTHROPS ATROX ASPER (Garman)

Six specimens were collected, all from the state of Chiapas: Palenque (No. 110430); Javarinero (No. 110431); La Esperanza, near Escuintla (Nos. 110432-3, HMS Nos. 15627, 16904). All are females, with 210 to 219 ventrals and 61 to 67 caudals.

The Museum has 15 other Mexican specimens: Chicharras, Chiapas (No. 46602); mountains near Santo Domingo, Oaxaca (Nos. 47931-2); Teapa, Tabasco (Nos. 46406, 46595); Mirador, Veracruz (Nos. 25046-9)⁵; Orizaba, Veracruz (No. 30220); San Rafael, Veracruz (No. 32149); Tuxpan, Veracruz (No. 25212); "Mexico" (Nos. 6372, 30243-4).

**BOTHROPS BARBOURI* (Dunn)

The Museum has a single specimen, the type (No. 46347), from Omilteme, Guerrero.⁶

**BOTHROPS BICOLOR* Bocourt

The Museum has a single specimen (No. 46511), from Chicharras, Chiapas.⁷

BOTHROPS DUNNI (Hartweg and Oliver)

Eleven specimens were obtained, all from the general vicinity of Tehuantepec, Oaxaca: Mount Guengola (Nos. 110416-7, HMS No. 11750); Tres Cruces (Nos. 110418-20); Cerro de Huamelula (No.

³ Dunn, 1924, p. 1.

⁴ Blanchard, 1924, pp. 1-5.

⁵ Cope, 1861, p. 295.

⁶ Dunn, 1919, pp. 213-214; Smith, 1941g, p. 62.

⁷ Smith, 1941g, pp. 61-62.

110461); Cajón de Piedra (No. 110422); Tehuantepec (Nos. 110423-4); and Río Grande, 12 miles north of Nilttepec (No. 110425).

Scale rows 23-23-19, except in one with 25-25-21 rows; ventrals 143 to 153 in five males, 147 to 155 in six females; caudals 36 to 42 in five males, 32 to 37 in six females; supralabials 9-9 in one, 9-10 in four, 10-10 in four, 10-11 in two; infralabials 10-10 in three, 10-11 in two, 11-11 in four, 11-12 in one, 12-12 in one; preoculars 3-3 except in one which has 4-4; suboculars 1-1 except in one which has 2-2; postoculars 2-2 to 3-4; bands on body 14 to 19.

The Museum has six others,⁸ one from Puerto Ángel (No. 46422), five from Tehuantepec, Oaxaca (Nos. 30266-70).

BOTHROPS MELANURUS (Müller)

Trimeresurus garciai SMITH, Proc. Biol. Soc. Washington, vol. 53, pp. 55-64, 1940.

One specimen, a paratype of *garciai* (No. 108602), is from Cacaolapam, Puebla.

The Museum has no others of the species.

BOTHROPS MEXICANUS (Duméril and Bibron)

Five specimens are in the collection, four (Nos. 110426-8, HMS. No. 7654) from Piedras Negras, Guatemala, and one (No. 110429) from Santa Rosa, near Comitán, Chiapas.

The Museum has no others of the species from Mexico.

The most conspicuous difference between *mexicanus* and *nummifer* in pattern is the shape and lateral extent of the dorsal blotches. In the former the blotches are large, dark brown rhombs that extend laterally to the tenth or as far as the sixth scale row. Sometimes these rhombs are black-edged. Opposite the lateral corner on each side is a short, black or dark brown transverse bar, sometimes reaching nearly to the ventrals. Usually, except on the anterior third of the body, the lateral bars are fused with the dorsal spots. Frequently, over all or a part of the body, the dorsal blotches are fused in pairs, producing a broad cross band; the lateral spots remain distinct from one another. The bands or rhombs may be somewhat staggered by displacement on the midline. In *nummifer* the pattern is of much the same character, except that the dorsal blotches tend to be less angular and more rounded, all are black-edged, and do not fuse with the lateral spots. The median blotches may be staggered and so fused with one another as to produce a rather broad, zigzag median band (such a variation does not occur in *mexicanus*), but they do not fuse in pairs as they frequently do in *mexicanus*.

⁸ Amaral, 1929b, p. 22.

Each species has about the same number of lateral spots; in *nummifer* the dorsal blotches are always of about the same number as the lateral spots; but in *mexicanus* the number may be reduced to as few as 10 or 11 by fusion of pairs of blotches.

Other pattern differences involve the tail and head. In *mexicanus* the tail tip is very light (yellowish) in young specimens, and it remains light until a size of at least 500 mm. is reached; specimens of greater size than this may develop dark color at the tip of the tail or may retain a light color. In *nummifer* the tail tip may be slightly lighter than the base, but it is well pigmented in even the youngest specimens; never is it distinctly light as in *mexicanus*. In adult *nummifer* the tail may remain dark or become rather light at the tip.

The position of the postocular dark stripe is generally diagnostic. In *mexicanus* it continues straight back from the eye, parallel to the lip, for about one-third its length; it then dips ventrally and reaches the level of the mouth just posterior to the rictus oris, terminating three or four scales posterior to that point; it usually involves only the posterior edge of the last scale in the lower row of temporals and never involves more than the last two scales. In *nummifer* the stripe passes almost in a straight line diagonally toward the angle of the mouth, thus almost always involving at least two, and usually three and sometimes four, of the scales in the lower row of temporals.

There are apparently no differences in ventral pattern.

In scutellation there is a difference in number of scale rows, which is 23 to 27 (one 23 in 6) anteriorly and 25 to 27 medially in *mexicanus*, but 21 to 25 anteriorly (one 25 in 13) and 23 to 25 medially (one 25 in 15) in *nummifer*. Ventrals in two male *mexicanus* are 124 to 127, in eight male *nummifer* 129 to 134; in four female *mexicanus* they are 127 to 131, in six female *nummifer* 120 to 134. Caudals in two male *mexicanus* are 32 to 36, in nine male *nummifer* 30 to 36; in four female *mexicanus* they are 31 to 35, in six female *nummifer* 23 to 30. Thus differences are apparent between the two forms in the ventrals of males and the caudals of females. In *mexicanus* the supralabials average somewhat more numerous, 9 seldom occurring (1 in 12 counts), and 11 frequently occurring (5 in 12 counts), while in *nummifer* 8 or 9 frequently occur (19 in 30 counts) and 11 not at all. In *mexicanus* the nasal is completely separated from the rostral by three small scales, while in *nummifer* it contacts the rostral, and the row of small scales is reduced to two, one, or none. The temporal scales of the lower row are somewhat smaller in *mexicanus* than in *nummifer*. In *mexicanus* the lower preocular is very poorly differentiated and does not enter the orbit; in *nummifer* it enters the orbit below the much larger upper preocular and is rather well defined.

The vertebral ridge is more accentuated in the southern form, although dissections of the neural spines of the anterior vertebrae show no noticeable differences. The keels of the median scale rows anteriorly are markedly different, however, as those of *mexicanus* terminate in an enlarged knob near the posterior tip of the scale, while those of *nummifer* reach the extreme tip; in the latter the knob is present but less distinct.

A large *nummifer* (female) measures 573 mm. in total length; somewhat shorter than this are other females with well-developed young. The larger male *nummifer* measures 567 mm. Apparently this species is notably smaller than *mexicanus*, one specimen (female) of which has been seen that measures 934 mm. in total length. The southern species probably reaches a maximum length of about 1,100 mm.

The southern form is distinctly shorter in proportion to body diameter, and the head is somewhat larger; these have long been known as characteristic features of the "jumping viper" (*mexicanus*). In *nummifer*, however, the head and body are of more nearly normal proportions. The differences are not of a type that may well be treated statistically.

It appears obvious that these two forms are distinct from each other yet closely related. Whether they are separate species or are subspecies is not clearly evident from data now available; certainly they are members of a single morphologic group and have complementary ranges, but this does not necessarily mean that an intergradation takes place. Since all specimens can readily be differentiated, and there is no overlap of variation in certain features differentiating them, it seems best to consider the two forms as distinct species.

TABLE 1.—Variation in *Bothrops mexicanus*

U.S.N.M. No.	Sex	Nasorostral scales	Tail tip	Scale rows	Ventrals	Caudals	Supralabials	Infralabials	Dorsal body spots	Lateral body spots	Total length	Tail length
											Mm.	Mm.
110426	♂	3-3	Light.....	23-25-19	124	32	10-10	12-12	19	21	266	31
110427	♂	3-3	Light.....	25-25-21	127	36	9-10	12-12	16	23	313	40
110428	♀	3-3	Lightish.....	27-27-19	127	31	11-11	13-?	20	23	934	84
110429	♀	3-3	Black.....	25-25-19	129	33	11-11	11-13	21	19	583	57

BOTHRUPS NASUTUS Bocourt

Trimeresurus nasutus SMITH, Zoologica, vol. 26, p. 62, 1941.

One specimen was secured at Piedras Negras, Guatemala (No. 110415). It was found sunning itself among the loose rocks of the

ruins of one of the Mayan buildings. Scale rows 23-23-19; ventrals 145; caudals 30; supralabials 9-9; infralabials 11-11; two preoculars (or three, but the middle very minute, not reaching orbit); three suboculars; two postoculars; 17 bands on body; female.

The Museum has no other northern specimens of the species.

***BOTHRUPS NUMMIFER** (Rüppell)

The Museum has eight specimens, from Mirador (No. 6371) and Orizaba (Nos. 61993-7), Veracruz, and "Veracruz" (Nos. 25044-5). Other specimens examined are from Zacualtipan, Hidalgo (A.N.S.P. No. 14768), and Necaxa, Puebla (U.M.M.Z. 63942); five bear no locality (A.N.S.P. 7245-9).

TABLE 2.—*Variation in Bothrops nummifer*

Museum No.	Sex	Nasorostral scales	Tail tip	Scale rows	Ventrals	Caudals	Supralabials	Infralabials	Dorsal body spots	Lateral body spots	Total length	Tail length
											<i>Mm.</i>	<i>Mm.</i>
U.S.N.M. No. 6371...	♀	2-2	Black	23-24-19	129	30	10-10	11-11	23	23	553	59
A.N.S.P. No. 7245...	♀	-----	Black	23-24-20	131	27	9-9	12-13	23	23	573	54
A.N.S.P. No. 7247...	♀	-----	Black	?-24-?	134	26+	10-10	11-12	-----	-----	-----	-----
A.N.S.P. No. 14768...	♀	-----	Black	23-23-19	127	29	10-10	11-11	25	25	462	46
U.S.N.M. No. 25045...	♀	0-0	Light	25-25-20	133	23	8-9	11-11	23	24	516	45
U. M. M. Z. No. 63942.....	♀	-----	Black	23-23-19	120	29	9-10	11-11	20	21	190	25
U.S.N.M. No. 25044...	♂	1-0	Dark	?-23-19	-----	33	9-9	12-12	-----	-----	yg	yg
U.S.N.M. No. 61995...	♂	2-2	Dark brown	23-24-19	130	33	9-10	11-12	21	22	170	23
U.S.N.M. No. 61996...	♂	2-2	Dark brown	23-23-19	131	34	9-10	10-10	22	21	176	26
U.S.N.M. No. 61993...	♂	2-2	Dark brown	23-23-19	134	35	9-10	10-11	-----	22	187	27
U.S.N.M. No. 61994...	♂	2-2	Dark brown	23-23-19	132	33	9-9	11-11	20	22	169	24
U.S.N.M. No. 61997...	♂	2-2	Dark brown	23-23-19	131	35	9-9	11-11	-----	24	170	25
A.N.S.P. No. 7249...	♂	-----	Black	21-23-17	129	30	9-9	10-11	22	22	567	65
A.N.S.P. No. 7248...	♂	-----	Black	23-23-19	132	34	8-9	12-12	23	23	-----	-----
A.N.S.P. No. 7246...	♂	-----	Black	23-23-19	133	36	9-10	11-12	20	20	-----	-----

***BOTHRUPS UNDULATUS** (Jan)

The Museum has five specimens, from Orizaba, Veracruz (No. 6319), Omilteme, Guerrero (Nos. 46345-6, 46348), and Oaxaca, Oaxaca (No. 46466).

***BOTHRUPS YUCATANICUS** (Smith)

The Museum has a single specimen, the type (No. 46571), from Chichen Itzá, Yucatán.⁹

⁹ Smith, 1941g, pp. 62-63.

CHERSODROMUS LIEBMANNI Reinhardt

Twenty specimens were secured, all at Cuautlapan, Veracruz (Nos. 109915-34). They were found under fallen banana trunks and other debris in banana patches.

Supralabials 6-7 in one, 7-7 in nineteen; infralabials 6-6 in two, 7-7 in four, 7-8 in six, 8-8 in eight; no preoculars, a postocular on one side in two, on both sides in five (sometimes very small), no postocular (i. e., fused with supraocular) in twelve, no postocular but temporal broadly in contact with eye in one. The belly is nearly or quite unspotted in some, nearly all black in others.

The Museum has two others, both from Orizaba, Veracruz (Nos. 6330, 7102).

TABLE 3.—Variation in *Chersodromus liebmanni*

U.S.N.M. No.	Sex	Ventrals	Caudals	U.S.N.M. No.	Sex	Ventrals	Caudals
109915	♀	132	35	109931	♀	135	35
109916	♀	142	33	109933	♀	134	35
109917	♀	132	33	109919	♂	128	39
109918	♀	134	32	109920	♂	129	39
109922	♀	138	37	109921	♂	129	37
109923	♀	139	35	109924	♂	127	38
109926	♀	134	37	109925	♂	124	38
109927	♀	142	32	109929	♂	127	40
109928	♀	135	37	109932	♂	129	43
109930	♀	131	33	109934	♂	129	41

CLELIA BAILEYI Smith

Clelia baileyi SMITH, Proc. U. S. Nat. Mus., vol. 92, pp. 391-393, 1942.

One specimen, the type (No. 111261), was secured at Potrero Viejo, Veracruz, by Dyfrig McH. Forbes.

The Museum has no others.

CLELIA CLELIA CLELIA (Daudin)

Six specimens are in the collection, one from Potrero Viejo, Veracruz (No. 111267), and five from various localities near Escuintla, Chiapas (Cruz de Piedra, Nos. 111262-3; La Esperanza, Nos. 111264-5; Las Gradass, No. 111266). Scale rows uniformly 17-17; ventrals 210, 217, 204, 220, 206, 206, respectively; caudals 82 ♂, ? ♀, 88 ♂, 76 ♀, 90 ♂, ? ♂; supralabials 7-7; infralabials 8-8; preoculars 1-1; postoculars 2-2; temporals 2-3 or 2-2.

The Museum has three other specimens, from San Juan Bautista (No. 6581, type of *Scolecophis scytalinus* Cope, 1866, p. 320), "Mexico" (No. 16388), and Tehuantepec (No. 32272, collected by Dr. Spear). These agree well with the others; all have the dorsal scales black-tipped.

*CLELIA CLELIA IMMACULATA Smith

The Museum has a single specimen, the type (No. 24966), from Guadalajara, Jalisco.¹⁰

*COLUBER CONSTRICTOR STEJNEGERIANUS (Cope)

The Museum has a single Mexican specimen, the type of *Zamenis conirostris* Cope (No. 1768), from Matamoros, Tamaulipas.¹¹

CONIOPHANES BIPUNCTATUS BISERIATUS Smith

Coniophanes bipunctatus biseriatus SMITH, Proc. Biol. Soc. Washington, vol. 53, pp. 59-60, 1940.

Four specimens (Nos. 108595, 109716-8) of the type series, as well as one embryo not included in the series (No. 109719), are from near Palenque, Chiapas. One other (No. 109715) is from Potrero Viejo, Veracruz, collected by Dyfrig McH. Forbes. The latter is a male, with 128 ventrals, the tail broken.

The type series was separated from *bipunctatus* (which was then considered as occurring in central Mexico as well as in Central America) largely on the basis of what appeared to be an exceptional pattern, with the inner edge of the lateral stripe scalloped, or two rows of spots enclosed between the two lateral stripes. Since this distinct pattern was not mentioned by Bailey (1939, pp. 24-26), it was considered a development restricted to specimens of this area. They were also compared with two large specimens from Tierra Colorada, Veracruz, which showed no evidence of the pattern characteristic of the Palenque specimens.

However, an examination of the Mexican specimens¹² of *bipunctatus* in the National Museum (including No. 30326, Orizaba, and No. 30343, Tehuantepec) shows that the peculiar pattern described is characteristic of the young and is still visible even in the Potrero specimen, which measures 357 mm. in body length. Accordingly, it cannot be held that the Palenque specimens are any different from other Mexican specimens now known.

¹⁰ Smith, 1942g, p. 394.

¹¹ Cope, 1895, p. 679.

¹² Bailey, 1939, p. 26.

The whole Mexican population is, however, different from the Central American specimens, in two characters: Ventral counts and pattern of the young and subadults. Young *bipunctatus* from British Honduras in the Field Museum, recently examined, are not spotted and do not have scalloped inner edges of the lateral stripes as in Mexican specimens; thus their separate identity is certain. The stripes are more distinct in Central American specimens.

CONIOPHANES FISSIDENS FISSIDENS (Günther)

Coniophanes fissidens fissidens SMITH, Proc. U. S. Nat. Mus., vol. 91, p. 104, 1941.

Four specimens were secured, all at Piedras Negras, Guatemala (Nos. 109720-2; HMS 7353). The ventral and caudal counts, respectively, of these in the order given are: 127, 71 (♀); 123, 75 (♂); 128, ? (♀); 127, 70 (♀). Scale rows 21-21-17; supralabials 8-8; infralabials 10-10; preoculars 1-1; postoculars 2-2 in all. A distinct, regular row of moderately large spots is present on each side of the belly.

The Museum has two other Mexican specimens,¹³ from Teapa, Tabasco (No. 46590), and San Andrés Tuxtla, Veracruz (No. 46389). The last is somewhat intermediate between *f. fissidens* and *f. proterops*.

CONIOPHANES FISSIDENS PROTEROPS Cope

Coniophanes fissidens proterops SMITH, Proc. U. S. Nat. Mus., vol. 91, pp. 105-106, 1941.

Ten specimens were secured, from the following localities: Tequeyutepec, Veracruz (Nos. 109769-73); Potrero Viejo, Veracruz (Nos. 109767-8); Cuautlapan, Veracruz (Nos. 109764-6). The Tequeyutepec specimens were found under stones on grassy slopes of the mountainous area west of Jalapa, after a period of rains in the middle of the dry season.

The Museum has 10 other specimens (see Smith, *loc. cit.*).

CONIOPHANES FISSIDENS PUNCTIGULARIS Cope

Coniophanes fissidens punctigularis SMITH, Proc. U. S. Nat. Mus., vol. 91, pp. 107-109, map fig. 33, 1941.

Forty-five specimens, all from the vicinity of Escuintla, Chiapas, are in the collections: Finca Juárez (Nos. 109723-5); Salto de Agua (Nos. 109726-7); Cruz de Piedra (Nos. 109728-35); La Esperanza (Nos. 109736-63, HMS Nos. 16556, 17053, 17162, 17279). Some were found during the day in rotten logs, but by far the greater part was found at night along trails through forest or coffee groves.

The Museum has five other specimens (see Smith, *loc. cit.*).

¹³ Smith, 1941s, p. 104.

*CONIOPHANES IMPERIALIS IMPERIALIS (Kennicott)

The Museum has two specimens, the type (No. 2060)¹⁴ from Matamoros, Tamaulipas, and one (No. 25204) from Tuxpan, Veracruz.

CONIOPHANES IMPERIALIS CLAVATUS (Peters)

Twelve specimens are in the collection, as follows: Potrero Viejo, Veracruz (Nos. 109774–82); Tenosique, Tabasco (Nos. 109783–4); Palenque, Chiapas (No. 109785).

The scutellation of the series is fairly uniform. All have one preocular, two postoculars, and eight supralabials; the infralabials are 9–9 in eight, 9–10 in one, 10–10 in two, 10–11 in one; ventral and caudal counts are given in table 4.

TABLE 4.—Variation in *Coniophanes imperialis clavatus*

U.S.N.M. No.	Sex	Ventrals	Caudals	Scale rows	U.S.N.M. No.	Sex	Ventrals	Caudals	Scale rows
109774	♂	127	-----	19–17	109780	♂	127	83	19–15
109775	♂	124	-----	19–15	109781	♂	124	80	19–15
109776	♂	124	-----	19–15	109782	♂	124	-----	19–16
109777	♂	127	82	19–15	109783	♀	131	79	19–17
109778	♂	126	79	19–15	109784	♀	129	78	19–15
109779	♂	118	77	19–15	109785	♀	129	80	19–15

The variation in coloration is considerable and regional. The Potrero specimens have a short temporal stripe, not reaching the end of the parietals (in one it comes very near); the dorsolateral stripes are not broken on the nape; and the middorsal stripe is about one scale wide in five, much less in three. The Palenque and Tenosique specimens agree with each other and differ from the Potrero specimens in having a longer temporal stripe (reaching end or very near end of parietals) and the dorsolateral stripes broken at the nape, leaving a round, nuchal spot on each side. The middorsal stripe in the Palenque specimen is very narrow, while in the Tenosique specimens it is broader but has a spotted appearance, as described by Bailey (1939, pp. 36, 37).

The Potrero specimens differ from the others also in having what appears to be a distinctly smaller, narrower head.

The Potrero specimens were found under stones; the one from Palenque was found under a rotten log; and the two Tenosique specimens were found at night along a cart road, shortly after a heavy rainstorm.

The Museum has one other, from Orizaba, Veracruz (No. 12123).

¹⁴ Baird and Girard, in Baird, 1859, p. 23, pl. 19, fig. 1.

CONIOPHANES IMPERIALIS COPEI Hartweg and Oliver

Twenty-one specimens were collected (Nos. 109786-99, 109800-3; HMS Nos. 12628, 12829-30), all in the vicinity of Tehuantepec, Oaxaca.

The supralabials are 8-8 in all; infralabials 10-10 in two, 9-10 in two, 9-9 in 17; there are two preoculars on both sides in one, on one side in another. Variation in ventral and caudal counts is shown in the accompanying table.

TABLE 5.—*Variation in Coniophanes imperialis copei*

No.	Sex	Scale rows	Ventrals	Caudals
HMS No. 12628.....	♀	19-15	136	69+?
U.S.N.M. No. 109786.....	♀	19-17	137	70
U.S.N.M. No. 109788.....	♀	19-17	133	72
U.S.N.M. No. 109794.....	♀	19-15	135	-----
U.S.N.M. No. 109796.....	♀	19-15	136	68
HMS No. 12829.....	♂	19-16	130	67+?
HMS No. 12830.....	♂	19-17	134	74
U.S.N.M. No. 109787.....	♂	19-15	129	76
U.S.N.M. No. 109789.....	♂	19-16	132	80
U.S.N.M. No. 109790.....	♂	19-17	132	75
U.S.N.M. No. 109791.....	♂	19-15	132	-----
U.S.N.M. No. 109792.....	♂	19-15	131	-----
U.S.N.M. No. 109795.....	♂	19-17	131	76
U.S.N.M. No. 109797.....	♂	19-15	133	-----
U.S.N.M. No. 109798.....	♂	19-15	127	70
U.S.N.M. No. 109799.....	♂	19-17	127	74
U.S.N.M. No. 109800.....	♂	19-15	130	74
U.S.N.M. No. 109801.....	♂	19-16	134	82
U.S.N.M. No. 109802.....	♂	19-17	136	69
U.S.N.M. No. 109803.....	♂	19-15	130	70
U.S.N.M. No. 109793.....	♂	19-15	131	74

The dorsolateral stripes are separate from the white, lateral nuchal spots in all; the sides of the body are much lighter on the outer scale rows (first and second) than on the third and fourth scale rows, both anteriorly and posteriorly. The width of the median stripe varies, but in all it is about one scale width anteriorly, less in the middle and posterior parts of the body.

The difference between the character of the lateral stripes in *copei* and *clavatus* is most apparent on the posterior part of the body, for anteriorly *clavatus* as well as *copei* has the lower half of the stripe much lighter than the upper half. Posteriorly the stripe is uniform black (or dark brown) in *clavatus*.

The specimens were most frequently found in piles of rotting debris in banana patches.

The Museum has one other specimen (No. 30299), from Tehuantepec.

CONIOPHANES PICEIVITTIS Cope

Two small females (Nos. 109804, 109805) were collected in the vicinity of Tehuantepec, Oaxaca. One of these (No. 109805) was found by army ants, routed from the leaves where it attempted to hide and brush off the ants, and eventually the snake wriggled off the edge of a bank into our camp site beside a stream.

Scutellation of head typical, except lower labials 9-9 in one. Ventrals 172, 173, respectively; caudals 83, 86. Scale rows 23-25-19 in both.

The Museum has two others, the cotypes (Nos. 30264-5)¹⁵ from Chihuitán, Oaxaca.

CONIOPHANES QUINQUEVITTATUS (Duméril and Bibron)

One specimen (No. 109806) was presented to me by Dr. Manuel Maldonado K., of the Instituto Politécnico de México. It was collected by Dr. Alfonse Dampf. The locality data are lost. Male, ventrals 153, tail incomplete.

The Museum has one other, from "Coatzacoalcos River, Veracruz" (No. 61182),¹⁶ the type of *Hydrops lubricus* Cope (1871, p. 217).

CONOPHIS LINEATUS LINEATUS (Duméril and Bibron)

Conophis lineatus lineatus SMITH, Journ. Washington Acad. Sci., vol. 31, p. 122, 1941.

A single specimen in the collection (No. 109708), secured by Dyfrigg McH. Forbes, was taken at Paso del Macho, Veracruz. It is a female with 166 ventrals, 55+? caudals, 19-19-17 scale rows, 8-8 supralabials, 10-10 infralabials, 1-1 preoculars, 2-2 postoculars, and 2-2 temporals. The pattern has previously been described. Another specimen (C. A. S. 73640) from Veracruz, Veracruz, has a pattern exactly as the former, and is similar in scutellation; the ventrals are 167, the caudals 70(♂).

The Museum has no others.

***CONOPHIS LINEATUS CONCOLOR Cope**

The Museum has three specimens, one from Chichen Itzá, Yucatán (No. 46395), and the two cotypes from "Yucatán" (No. 12368).¹⁷

¹⁵ Cope, 1869, p. 149; Bailey, 1939, p. 31.

¹⁶ Bailey, 1939, p. 28.

¹⁷ Cope, 1867b, p. 318.

CONOPHIS PULCHER SIMILIS Bocourt

Conophis pulcher plagosus SMITH, Journ. Washington Acad. Sci., vol. 31, pp. 121-122, 1941.

Conophis pulcher similis SMITH, Proc. U. S. Nat. Mus., vol. 92, p. 395, 1942.

The type of *plagosus* (No. 109707) was found near Tonalá, Chiapas, moving about very slowly, during the day, at the base of a large bush the outer branches of which well shaded the area where the snake was lying.

The Museum has no others.

*CONOPHIS VITTATUS VITTATUS Peters

Five specimens are in the Museum, including No. 29123,¹⁸ from Guadalajara, Jalisco, and Nos. 31394-7, from Colima.

CONOPHIS VITTATUS VIDUUS Cope

Conophis vittatus viduus SMITH, Journ. Washington Acad. Sci., vol. 31, pp. 120-121, 1941.

Seven specimens were secured in the vicinity of Tehuantepec, Oaxaca (Nos. 109709-14; HMS No. 12100). Supralabials 7-7 in all; infralabials 8-9 in three, 9-9 in two, 9-10 in two; preoculars 1-1 in all; postoculars 2-3 in one, 2-2 in the remainder; two primary temporals in all, two to four secondary temporals; scale rows 19-19-17 in all.

The Museum has two others, both from "Tehuantepec"¹⁹ (No. 30259, type of *viduus*, and No. 30258, cotype of *sumichrasti*).

TABLE 6.—Variation in *Conophis vittatus viduus*

No.	Sex	Ventrals	Caudals
U.S.N.M. No. 109711.....	♂	157	66
U.S.N.M. No. 109712.....	♂	156	67
U.S.N.M. No. 109714.....	♂	164	68
U.S.N.M. No. 109709.....	♀	164	57
HMS No. 12100.....	♀	166	65
U.S.N.M. No. 109710.....	♀	175	57
U.S.N.M. No. 109713.....	♀	167	57

CONOPSIS NASUS Günther

Conopsis nasus TAYLOR and SMITH, Univ. Kansas Sci. Bull., vol. 28, pp. 329-332, 1942.

Eight specimens were secured, three at Guanajuato, Guanajuato (Nos. 110663-5), one 10 miles east of Morelia, Michoacán (No.

¹⁸ Lectoholotype cotype of *Conophis sumichrasti sumichrasti* Cope, 1876, p. 137.

¹⁹ Cope, 1876, p. 137.

110670), and four at Tacúcuaro, Michoacán (Nos. 110666-9). The internasals are lacking in all. All have 7-7 supralabials, 6-6 infralabials, 1-1 preoculars, 2-2 postoculars, and 1-2 temporals; the posterior chin shields are in contact medially in 4, separated in 4; each of these have a single undivided subcaudal scale; the prefrontals contact the labials on one side of one, on both sides of another. Other details are given in table 7.

TABLE 7.—*Variation in Conopsis nasus*

U.S.N.M. No.	Sex	Ventrals	Caudals	Loreal	Total length	Tail length
					<i>Mm.</i>	<i>Mm.</i>
110665	♀	131	29	0-0	263	37
110663	♂	122	34	1-1	119	19
110664	♂	123	37	1-1	273	46
110666	♂	127	32	0-0	311	48
110667	♂	129	32	0-0	280	43
110668	♂	131	35+	0-0	375+	55+
110669	♂	128	36	0-0	257	44
110670	♂	123	35	0-1	275	49

CONSTRUCTOR CONSTRUCTOR IMPERATOR (Daudin)

Thirty-two specimens were secured, as follows: CHIAPAS: Palenque (Nos. 111285-6); Acacoyagua (No. 111288); La Esperanza, near Escuintla (No. 111287). OAXACA: Cerro Arenal (No. 111289); Coyul (No. 111293); Salina Cruz (Nos. 111294-311); Tehuantepec (Nos. 111290-2). VERACRUZ: Matacabresto (Nos. 111280-2); Potrero Viejo (Nos. 111283-4).

The Museum has 23 other Mexican specimens, as follows: CHIAPAS: Huchuetán (No. 46477). COLIMA: Colima (Nos. 62024, 62074, 63846-8); Manzanillo (No. 46608). GUERRERO: Zacatula River, near Lauria (No. 63851). MICHOCÁN: Neshá River, Sierra Madre (No. 62025); Chacan River, Sierra Madre (Nos. 62073, 63849-50); Plains of Nuroapa, Huroha Volcano (No. 63852). OAXACA: Tehuantepec (Nos. 30420-1). SINALOA: Sierra de Choix (No. 46503). SONORA (No. 61956). VERACRUZ: Mirador (Nos. 6404, 6582); Córdoba (No. 30520); Santa María (No. 46561). YUCATÁN (No. 11380): Chichen Itzá (No. 46394). I have also examined three others from Chichen Itzá, Yucatán, in the Field Museum of Natural History (Nos. 26990-2).

A total of 41 specimens from all localities represented by the above series have been counted, and the number of median caudal rows was

found to vary from 65 to 79. The fact that these specimens represent practically all extremes of the range of *Constrictor* in Mexico,

TABLE 8.—*Variation in Constrictor constrictor imperator*

Museum No.	Sex	Scale rows	Ventrals	Caudals	Supra-labials	Infra-labials
U. S. N. M. No. 6404	♀	53-69-35	244	61	19-20	21-22
U. S. N. M. No. 6582	♀	55-69-37	249	54+	20-20	22-22
U. S. N. M. No. 11380	♀	59-79-41	242	59+	21-?	24-?
U. S. N. M. No. 30420 ¹	♀	55-? -?	-----	-----	18-19	22-22
U. S. N. M. No. 30421	♀	51-75-39	246	54+	19-19	23-23
U. S. N. M. No. 46561	♀	49-65-35	239	-----	18-21	22-24
U. S. N. M. No. 61956	♀	55-75-39	246	59	21-21	24-25
U. S. N. M. No. 63846	♀	59-79-39	241	58	21-22	21-24
U. S. N. M. No. 63851	♀	59-75-39	238	54+	23-?	23-?
U. S. N. M. No. 63852	♀	61-79-41	-----	53	20-21	22-?
U. S. N. M. No. 111280	♀	51-66-34	235	53	18-?	21-?
U. S. N. M. No. 111286	♀	54-69-36	242	55	19-20	22-23
U. S. N. M. No. 111287	♀	57-67-35	250	58	18-19	22-23
U. S. N. M. No. 111288	♀	59-69-39	239	48	20-21	24-24
U. S. N. M. No. 111289	♀	72-39	249	53	20-19	25-22
U. S. N. M. No. 111290	♀	53-71-37	253	57	20-20	22-24
U. S. N. M. No. 111291	♀	61-75-39	-----	56	19-21	25-25
U. S. N. M. No. 111292	♀	57-71-37	249	52	20-21	23-23
U. S. N. M. No. 111293	♀	57-73-40	253	54	20-20	24-23
U. S. N. M. No. 111311	♀	55-71-41	247	49+	18-18	21-23
F. M. N. H. No. 26991	♂	59-75-41	240	55	19-20	23-24
U. S. N. M. No. 30520	♂	51-73-37	245	56	22-22	24-25
U. S. N. M. No. 46394	♂	57-75-39	245	70	21-22	26-26
U. S. N. M. No. 46477	♂	57-69-41	² 242	-----	19-20	23-23
U. S. N. M. No. 46503	♂	59-73-37	241	58	21-21	23-24
U. S. N. M. No. 46608	♂	63-79-39	243	63	20-21	23-24
U. S. N. M. No. 62024	♂	59-75-39	247	58+	21-?	22-?
U. S. N. M. No. 62025	♂	61-75-37	241	65	20-20	22-23
U. S. N. M. No. 62073	♂	57-75-41	238	65+	19-19	25-?
U. S. N. M. No. 62074	♂	55-69-41	234	65+?	21-19	23-23
U. S. N. M. No. 63847	♂	59-75-39	247	61	19-20	21-23
U. S. N. M. No. 63848	♂	57-77-41	243	67	20-22	24-?
U. S. N. M. No. 63849	♂	55-69-35	243	64	-----	21-21
U. S. N. M. No. 63850	♂	57-71-39	246	64	20-21	24-24
U. S. N. M. No. 111281 ¹	?	-----	-----	-----	18-19	21-21
U. S. N. M. No. 111282 ^{2,3}	♂	-----	-----	60	19-21	23-23
U. S. N. M. No. 111283	♂	50-67-34	231	58	17-17	20-21
U. S. N. M. No. 111284	♂	53-67-35	235	57	19-20	22-22
U. S. N. M. No. 111285	♂	56-74-37	242	65	20-21	23-24
F. M. N. H. No. 26992	♂	59-75-41	236	62	21-20	24-24
F. M. N. H. No. 26993	♂	59-73-43	244	62	20-21	23-24

¹ Head of² Anal ar³ Middle

justifies, I believe, the assumption that Jan's *mexicana* (Jan, 1863, p. 23; supposedly with 55 scale rows) either does not occur in Mexico or else was improperly counted. The low counts given by Andrews (1937, p. 356) are not correct; he cites them as 56 to 62 in four specimens, but a recheck of three (Nos. 26990-2) of the same specimens (the fourth could not be found) yielded maximum counts of 73 to 75. Since little has been recorded of the variation in this species, table 8 is of interest.

It appears that *C. c. imperator* does not reach the large size of its southern relative, *c. constrictor*. I have never seen a specimen in the field that would exceed perhaps 7 feet in total length, and the largest measured specimen is a dried, stretched skin of about 2,420 mm. in total length (7.9 feet).

The only apparent geographic correlation of the variation recorded in Mexican *Constrictor* is an increase in number of ventral scales on María Madre Island. The three known specimens have counts higher than any from the rest of Mexico, and accordingly they may be considered to represent a recognizably different race, which may be called

*CONSTRUCTOR CONSTRUCTOR SIGMA, new subspecies

Holotype.—U.S.N.M. No. 46484, collected by Nelson and Goldman on María Madre Island, Tres Mariás Islands, May 12, 1897.

Paratypes.—Two, including U.S.N.M. No. 24672, collected with the preceding, and Calif. Acad. Sci. No. 58681, collected by Joseph R. Slevin at the type locality on May 21, 1925.

Diagnosis.—Like *Constrictor constrictor imperator*, but ventrals more numerous, 258 to 259 as compared with the range of 225 to 253 in mainland specimens.

Description of holotype.—Alcoholic skin of an adult female, estimated length about 200 cm., tail and head intact. Scale rows 59-77-39; ventrals 259; 55 subcaudals, a few near tip probably missing; five subcaudals divided, others entire; 20-20 supralabials, 23-23 infralabials.

Color as typical of the species, markings rather indistinct. Preocular dark stripe very short, not so long as eye; postocular dark stripe very narrow for a short distance behind eye (a little less than length of eye), then abruptly expanding; lower edge of stripe distinct, upper poorly defined; lower edge of stripe passes through rictus oris. No other marks on head, except for two large spots in the infralabial region on each side. Belly with rather small, black spots, scattered along edges of ventrals.

Variation.—Nos. 24672 and 58681 have, respectively, 258 and 258 ventrals, 57-77-41 and ?-77-? scale rows, 65 and 66 subcaudals, 22-22 and 19-20 supralabials, 24-? and 23-24 infralabials. Both are males.

Remarks.—For comparison with *sigma* I have had available not only the counts given in table 8 for *imperator*, but also 26 others given by Allen, 1933, p. 11; Bocourt, 1882, pp. 519–521; Boulenger, 1893, p. 119; Brown, 1893, p. 429; Gaige, 1936, p. 298; Hartweg and Oliver, 1940, p. 19; Oliver, 1937, p. 19; and Ruthven, 1912, pp. 323–324. With one exception, all these counts are less than 253, my maximum; this exception is a count of 261 on a specimen from Tehuantepec. This seems aberrant, since it is 9 higher than the 61 other counts available, but in any case there is no doubt that at least an average difference exists between the Tres Mariás specimens and those from the mainland. Exclusive of the single aberrant count, those from the mainland vary from 225 (Boulenger) to 253, with an average of 241.6 and an interquartile range of 235 to 249.

CROTALUS ATROX Baird and Girard

Eleven specimens were secured, as follows: CHIHUAHUA: 7 miles west of Carrizal (No. 104614); 4 miles south of Ascención (No. 104625); Río Santa María, near Progreso (Nos. 104619–20, 104622–4). NUEVO LEÓN: 20 km. south of Sabinas Hidalgo (HMS No. 11530). TAMAULIPAS: Hacienda La Clementina, 4 miles west of Forlón (No. 110607); 20 to 26 km. south of Nuevo Laredo (Nos. 110608–9).

The Museum has 14 other Mexican specimens, from CHIHUAHUA: "Chihuahua" (Nos. 14280, 36995); Lake Santa María (Nos. 46475, 46596); Santa Cruz (No. 263). NUEVO LEÓN (No. 1302). SAN LUIS POTOSÍ (No. 46474). SONORA: Camoa (Nos. 46378–9); San Bernardino (Nos. 21045–6); Colorado River 10 miles south of United States-Mexican border (Nos. 21824–5). TAMAULIPAS: Soto La Marina (No. 37577).

***CROTALUS BASILISCUS** (Cope)

The Museum has three specimens, including the type (No. 53586)²⁰ from Colima, one (No. 46468)²¹ from Yaganiza, San Pablo, Oaxaca, and one (No. 46467)²¹ from Oaxaca, Oaxaca.

CROTALUS DURISSUS DURISSUS Linnaeus

Five specimens are from La Esperanza, Chiapas (near Escuintla) (Nos. 110613–4); Xochicalco, Morelos (No. 110610); Las Vacas, 24 km. from Tequexistlán, Oaxaca (No. 110612); Paso del Macho, Veracruz (No. 110611). The ventrals and caudals of these specimens, in the above order, are: 172, 32 (♂); 173, 29 (♂); 182, — (?); 182, 25 (♀); 174, 24 (♀). In the Oaxaca specimen the neck stripes are only as long as the head; they are followed after an interval of one scale length by a

²⁰ Cope, 1864, p. 166.

²¹ Gloyd, 1940, pp. 142–149, map 10, pl. 16, fig. 1.

short pair of stripes five scales long; after an interval of one (two on one side) scale length, follows another pair of stripes, these covering seven scale lengths; posterior to this the markings are blotchlike. In the other specimens the neck stripes are unbroken for a distance equal to about three or four times the length of the head. In one the posterior third of the stripes is expanded laterally somewhat, appearing blotchlike.

The Museum has nine other Mexican specimens, from CAMPECHE: Apazote (Nos. 46399-46400). OAXACA: Tehuantepec (No. 30260); Huilotepec (No. 46473). TABASCO: Montecristo (Emiliano Zapata) (No. 46522). YUCATÁN: Chichen Itzá (No. 46570); "Yucatán" (No. 6557[2]). LOCALITY UNKNOWN: No. 12716, "City of Mexico," certainly incorrect.

**CROTALUS LEPIDUS KLAUBERI* Gloyd

Nine²² specimens of this race are in the Museum, as follows: CHIHUAHUA: Lake Santa María (Nos. 46597-8); "Chihuahua" (Nos. 36994, 56165). DURANGO: Guanacevi (No. 46349). JALISCO: Bolanos (No. 46472). ZACATECAS: Berriozabal (No. 46454); Plateado (Nos. 46470-1).

**CROTALUS MOLOSSUS MOLOSSUS* Baird and Girard

Four specimens are in the Museum, from Sierra Encarnación, Coahuila (No. 46507), Dist. Guerrero, Chihuahua, 2,193 m. (No. 42499), Carbonero Canyon, Sierra del Carmen, Coahuila (No. 103738),²³ and San Esteban Island (No. 64586).²⁴

CROTALUS MOLOSSUS NIGRESCENS Gloyd

Five specimens are from Puente Colorada, Veracruz (No. 110603), and Tacícuaro, Michoacán (Nos. 110599-602). The scale counts of these, in the order cited, are: Scale rows 27-25-21, 27-25-19, 27-23-19, 27-25-19; ventrals 171, 171, 165, 175, 166; caudals 25 (♂), 24 (♂), 19 (♀), 21 (♀), 26 (♂). Nos. 110600 and 110602, which have the lowest ventral counts known for *nigrescens*, are somewhat lighter posteriorly than the other specimens, and the black tail bands are faintly visible (4 or 5 in one, 6 or 7 in the other). In the other specimens, including a smaller *nigrescens* (No. 110601) from the same locality, the tail is completely and uniformly black. The specimens in question do not, however, seem to approach *basiliscus*, in which the tail is considerably lighter.

²² Gloyd, 1940, pp. 109-112, map 7, pl. 11, fig. 2.

²³ Gloyd and Smith, 1942, p. 235.

²⁴ Gloyd, 1940, p. 160.

The Museum has eight other specimens, as follows: **CHIHUAHUA**: Guadalupe y Calvo (Nos. 46486-7), **DISTRITO FEDERAL**: Mexico City (No. 12724); Tlalpam (No. 46353). **DURANGO**: El Salto (No. 46485). **MICHOACÁN**: Pátzcuaro (No. 46424). **SAN LUIS POTOSÍ**: Mountains near Jesús María (No. 46425). **ZACATECAS**: Plateado (No. 46469).

CROTALUS POLYSTICTUS (Cope)

Three female specimens are from Tacícuaru, Michoacán (Nos. 110604-6). Scale counts of these, in the order numbered, are: Scale rows ?-27-19, 33-27-21, 29-27-21; ventrals 168, 171, 169; caudals 20, 20, 22; supralabials 14-14, 13-14, 13-14; infralabials 15-15, 14-15, 14-15.

The Museum has nine others, from "Guanajuato" (Nos. 24448, 26152, 46508); "Mexico" (No. 29775); Valley of Mexico (No. 32170); Plateado, Zacatecas (Nos. 46330-1); and Tupátaro (Guanajuato? Michoacán? Jalisco?) (Nos. 10250, 11363).

CROTALUS SCUTULATUS SCUTULATUS (Kennicott)

Ten specimens, all from the state of Chihuahua, were collected: 10 miles north of Casas Grandes (No. 104609), and Río Santa María, near Progreso (Nos. 104610-3, 104615-8, 104621).

The Museum has four other Mexican specimens, from "Chihuahua" (Nos. 14225, 14278); Chihuahua City (No. 46450); and Casas Grandes, Chihuahua (No. 46373).

CROTALUS SCUTULATUS SALVINI Günther

Crotalus scutulatus salvini GLOYD, Chicago Acad. Sci. Spec. Publ. 4, pp. 201-202, map 15, 1940.

One specimen, from San Diego, south of Tehuacán, Puebla (No. 110926). A male, with 21-25-17 scale rows, 164 ventrals, 26 caudals, 13-15 supralabials, and 14-15 infralabials.

The Museum has no others.

***CROTALUS STEJNEGERI Dunn**

The Museum has two specimens, the type (No. 46486) and a paratype (No. 46460) from Plomosas, Sinaloa.²⁵

CROTALUS TRISERIATUS TRISERIATUS (Wagler)

Two specimens (male) are from Tacícuaru, Michoacán (Nos. 110597, 110925). Scale rows 25-23-17, 23-23-17, respectively; ventrals 147, 146; caudals 24, 25; supralabials 11-?; infralabials 12-?, 11-12. Dor-

²⁵ Dunn, 1919, p. 213; Gloyd, 1940, pp. 232-233, map 21, pl. 29.

sal surface very dark, number of blotches indeterminate. Certain blotches that can be discerned are four scales long and cover about five rows transversely.

The Museum has two others, from Santa Teresa, Nayarit (No. 46333), and Ameca, Jalisco (No. 46465), referred by Gloyd (1940, p. 87) to this subspecies.

CROTALUS TRISERIATUS ANAHUACUS Gloyd

One male specimen (No. 110598) is from El Limón Totalco, Veracruz. It was found quietly sunning itself in a lava field at about 10 o'clock on the morning of March 1, 1940. The preceding night had been very cold, and even *Toluca* (typically nocturnal snakes) were found sunning themselves the following day. The elevation was 7,600 feet. Scale rows 21-21-15, ventrals 161, caudals 25, supralabials 9-10, infralabials 9-9, body spots 40, tail spots 7.

The Museum has no others of the subspecies.

**CROTALUS TRISERIATUS OMILTEMANUS* Günther

A single specimen in the Museum (No. 46343) is from Omilteme, Guerrero.²⁶

**CROTALUS TRISERIATUS PRICEI* Van Denburgh

The Museum has 18 specimens,²⁷ all from the state of Chihuahua: Dist. Galeana, 15 miles north of Chuichupa, 2,418 m. (Nos. 42865-72); Río Piedras Verdes, 6,800 feet. (No. 26594); Dist. Guerrero (Nos. 40062, 42494-5, 42498); Colonia García (Nos. 46327-9; Guadalupe y Calvo (No. 46350); "Chihuahua" (No. 55858).

**CROTALUS VIRIDIS VIRIDIS* (Rafinesque)

The Museum has four specimens,²⁸ No. 264 from Espía, Chihuahua, and Nos. 61955 and 61957-8 from Sonora.

**CROTALUS WILLARDI* Meek

The Museum has 10 specimens, from CHIHUAHUA: Río Piedras Verdes (No. 26593); Dist. Guerrero (Nos. 42496-7); Sierra Madre (No. 42709); Colonia García (Nos. 46322-6). ZACATECAS: Sierra Madre (No. 46332).

DENDROPHIDION VINITOR Smith

FIGURE 13

Dendrophidion vinitor SMITH, Proc. Biol. Soc. Washington, vol. 54, pp. 74-76, 1941.

²⁶ Gloyd, 1940, p. 95-96, map 6, pl. 8.

²⁷ Amaral, 1927a, p. 53.

²⁸ Amaral, 1929a, p. 89.

One specimen, the type (No. 110662), was collected at Piedras Negras, Guatemala.

The Museum has two Mexican specimens, from Teapa, Tabasco (No. 46589), and "Mexico" (No. 7099).

Dugès (1892, pp. 100-101, pl. 5, colored) describes and illustrates this species on the basis of a specimen from Motzorongo, Veracruz. His specimen has 155 ventrals, 120 caudals, and a single anal, and thus agrees with *vinitor*.

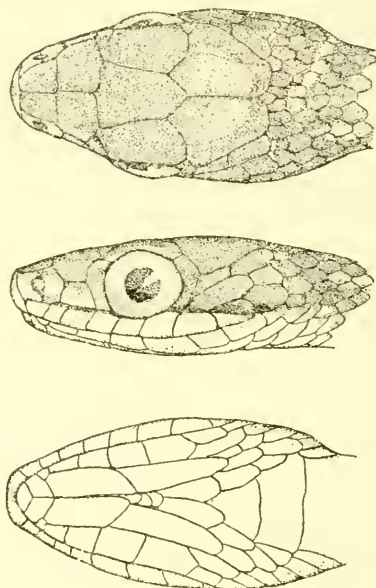


FIGURE 13.—Head scales and pattern of *Dendrophidion vinitor* Smith, from EHT-HMS No. 27496, La Gloria, Oaxaca. Twice natural size.

Three other specimens recently examined are EHT-HMS Nos. 27496-8, from La Gloria, Oaxaca (north of Niltepec), collected by Thomas MacDougall. These are all females, with 163, 160, 154 ventrals, respectively; all with a single anal; caudals ?, 117, 113, respectively. The preoculars are 1-1, postoculars 2-2, and temporals 2-2 in all; the fourth, fifth, and sixth labials border the orbit, and the temporals are separated from the sixth labial in all. All have the barred pattern typical of the species.

*DIADOPHIS REGALIS LAETUS Jan

The Museum has a single specimen, No. 2067, from Santa Magdalena, Sonora.

DIADOPHIS DUGESII Villada

One specimen (No. 109935) was taken 6 miles east of Quiroga, Michoacán. It was found under a large stone in an open oak woods, after a heavy shower.

In addition to this specimen, six others in the National Museum have been examined: Guanajuato (Nos. 11361, 12681); Mirador, Veracruz (No. 31051); Mexico (Nos. 12728, 26141-2). The variation in scutellation of these follows: Scale rows 17-15 in two, 17-17 in five; supralabials 7-7 in five, 8-8 in two; infralabials 7-8 in one, 8-8 in five, 8-10 in one; three postoculars on one side in two, otherwise two preoculars and two postoculars; temporals 1-2 on one side in two, on both sides in four, 1-1 on one side in two, on both sides in one. Ventrals and caudals in the order listed above: 178, 56 (♂); 207, 53 (♀); 201, 52 (♀); 180, 57 (♂); 177, ? (♂); 179, 57 (♂); 205, 53 (♀). The range in ventrals and caudals of five males now known of the species is 177 to 183, 56 to 57, respectively, in five females, 201 to 207, and 49 to 53, respectively. In no specimen does the white of the ventral surface extend onto the first row of dorsal scales.

The maxilla of the Michoacán specimen has nine subequal teeth, followed after a long diastema by two much enlarged, ungrooved (although flanged) teeth, which are distinctly offset from the other teeth.

This species is very distinct from *regalis*, differing by having the white of the ventral surface not encroaching upon the first row of dorsal scales (does in *regalis*), a distinctly lower ventral count (more than 206 in males, more than 220 in females of *regalis*), usually 17 scale rows posteriorly (rarely 17 in *regalis*). These differences may be subspecific, but they are so great that they are here considered specific. *D. regalis* has a maxillary dentition exactly like that of the specimen described of *dugesii*.

The proper orthography of the specific name of this species is *dugesii*, not *dougesii* as it was spelled in the original description. Two reasons support this conclusion: (1) The species is named for Dugès; (2) the spelling is corrected in two places in the same volume. In the index to that volume, the article is listed "El *Diadophis punctatus*, v. *Dugesii*." In the page of "Erratas Notables del Tomo III," the correction is made in the spelling of the name in the description itself ("Página 226, Dice DOUGESII, Debe Decir DUGESII").

**DRYADOPHIS MELANOLOMUS MELANOLOMUS* (Cope)

The Museum has three specimens, including the type (No. 24985)²⁹ and two others (Nos. 10302, 24986) from Yucatán.

²⁹ Cope, 1868a, p. 134.

**DRYADOPHIS MELANOLOMUS SLEVINI* (Stuart)

The Museum has six specimens, five from María Madre Island (Nos. 24674-8) and one from María Magdalena Island (No. 24679), in the Tres Marías Islands. One other specimen has been examined, from María Madre Island (L. M. Klauber No. 22686). The ventrals and caudals, respectively, in the order listed, are 188, 110; 185, ?; 183, ?; 188, ?; 184, 111; 182, ?; 185, ?. Slevin (1926, p. 201) gives counts for six other specimens.

DRYADOPHIS MELANOLOMUS STUARTI, new subspecies

Holotype.—U. S. N. M. No. 110924, collected near Acapulco, Guerrero, on September 3, 1939, by Rozella Smith.

Paratypes.—Four, including EHT-HMS No. 10094, a topotype; Mus. Zool. Univ. Mich. No. 80202, Paso del Río, Colima; Carnegie Mus. No. 7253, Cualata, Colima; and U.S.N.M. No. 56283, Colima.

TABLE 9.—*Variation in Dryadophis melanolomus stuarti*

Museum No.	Sex	Ventrals	Caudals
EHT-HMS No. 10094 ¹ -----	?	195	115
Carnegie No. 7253 ² -----	?	179	117
U.M.M.Z. No. 80202 ³ -----	?	184	115
U.S.N.M. No. 110899-----	♂	182	116
U.S.N.M. No. 110900-----	♂	182	-----
U.S.N.M. No. 110904-----	♂	180	-----
U.S.N.M. No. 110905-----	♂	180	118
U.S.N.M. No. 110907-----	♂	179	115
U.S.N.M. No. 110908-----	♂	180	113
U.S.N.M. No. 110924-----	♂	185	-----
U.S.N.M. No. 56283-----	♀	185	118
U.S.N.M. No. 110901-----	♀	184	-----
U.S.N.M. No. 110902-----	♀	188	-----
U.S.N.M. No. 110903-----	♀	188	113
U.S.N.M. No. 110906-----	♀	184	113

¹ From Taylor, 1940, p. 458.² From Smith, 1939, p. 317.³ From Oliver, 1937, p. 19.

Diagnosis.—Like *D. m. slevini*, except markings on chin, gular region, and anterior part of belly very poorly defined in adults, more distinct in the young; middle of belly not dark-pigmented; dorsal scales uniform light olive in adults, practically without evidence of remnants of the dark juvenile markings.

Description of holotype.—A large male; dorsal color uniform light olive (bluish shine where scales are shed); supralabial region somewhat lighter, but not abruptly differentiated in color from top of

head; most dorsal scales with a very narrow black border on their anterodorsal and anteroventral edges. Ventral surface of head with scattered, irregular, bluish stippling not forming distinct marks; dorsal ground color extending to "keel" on each edge of ventrals; a poorly defined light line following the lateroventral "keel"; some bluish stippling medial to this light line, but middle of belly scales immaculate. A small, dark spot at the median corner of each subcaudal, forming a zigzag series of dots down middle of tail.

Scale rows 17-17-15; ventrals 185; anal divided; tail broken; supralabials 9-9, fourth, fifth, and sixth entering orbit; infralabials 11-11; preoculars 1-1; postoculars 2-2; temporals 2-2; body length 855 mm.

Variation.—Ten specimens from the mainland have been examined and are referred to *stuarti*. They are from Finca Juárez (Nos. 110901-6), Salto de Agua (No. 110900), La Esperanza (No. 110899), Acacoyagua (No. 110908), and Colonia Soconusco (No. 110907), all in the vicinity of Escuintla, Chiapas. For reasons noted by Stuart (1941, p. 95) these cannot be considered paratypes of *stuarti*, although for the time being they are referred to that race in the absence of any apparent morphological differences.

The entire series of 15 *stuarti* show a range of variation in ventral counts from 179 to 195. The latter count (from literature) may be in error, as the next highest is 188. Exclusive of this count, the average for 14 specimens is 182.9. One specimen has 10-10 supralabials, another 9-10; the infralabials are 10-10 in one, 10-11 in one; in one specimen only two labials enter the eye; otherwise the scutellation is much as in the holotype.

Comparisons.—The chief differences between *stuarti* and *slevini* are in pattern. In the latter the dark, checkered, anterior ventral pattern is extremely prominent in the young; the marks extend posteriorly more than a third the length of the belly. Large adults of the same race still show very distinct, although somewhat more diffuse, ventral markings, and they retain a fairly distinct black edging on the dorsal scales. In half-grown specimens, a dark stripe passing through the eye is still evident, while in adults it may disappear. The supralabials are mostly white (cream) in subadults but may become partly suffused with olive in adults. In *stuarti* the anterior ventral pattern is lost almost completely in adults and subadults; by this character all except the young can be distinguished at a glance. The black edging on the dorsal scales is so faint that it can be distinguished only by completely exposing the bases of the scales, while in *slevini* the marks are evident without spreading the scales. The ocular stripe is not apparent, and in adults the supralabial region is entirely pigmented.

There is a significant difference in number of ventrals, but this is not one than can certainly be used in identifying specimens. In 13 specimens of *slevini* (6 counts from Slevin, 1926, p. 201) the ventrals vary from 182 to 202, average 189.7, while the average in *stuarti* is 182.9. In the latter 86 per cent are less than 185, while in *slevini* 76.9 per cent are 185 or more.

DRYADOPHIS MELANOLOMUS TEHUANAЕ, new subspecies

Holotype.—U.S.N.M. No. 110917, from Cerro Guengola, Oaxaca.

Paratypes.—Twenty, including U.S.N.M. Nos. 110909–16, from Tres Cruces, Oaxaca, and Nos. 110918–23, La Concepción, Oaxaca; and U. M. M. Z. Nos. 82546–52, from Tres Cruces, San Pedro, and Mixtequilla Mountains, Oaxaca. All these localities are in the vicinity of Tehuantepec.

TABLE 10.—*Variation in Dryadophis melanolomus tehuanae*

Museum No.	Sex	Ventrals	Caudals
U.M.M.Z. No. 82546	♀	192	106
U.M.M.Z. No. 82547	♀	189	106
U.M.M.Z. No. 82548	♀	187	103
U.S.N.M. No. 110909	♀	184	106
U.S.N.M. No. 110911	♀	184	107
U.S.N.M. No. 110913	♀	188	-----
U.S.N.M. No. 110914	♀	189	108
U.S.N.M. No. 110916	♀	176	108
U.S.N.M. No. 110917	♀	186	107
U.S.N.M. No. 110918	♀	186	105
U.S.N.M. No. 110919	♀	187	105
U.S.N.M. No. 110923	♀	176	-----
U.M.M.Z. No. 82549	♂	182	110
U.M.M.Z. No. 82550	♂	182	110
U.M.M.Z. No. 82551	♂	181	111
U.M.M.Z. No. 82552	♂	183	110
U.S.N.M. No. 110910	♂	188	108
U.S.N.M. No. 110912	♂	185	112
U.S.N.M. No. 110915	♂	181	109
U.S.N.M. No. 110920	♂	174	107
U.S.N.M. No. 110921	♂	178	108
U.S.N.M. No. 110922	♂	182	106

Diagnosis.—Like *D. m. stuarti*, except caudals 103 to 112, as opposed to 113 to 118 of the first.

Description of holotype.—A female with 17–17–15 scale rows, 186 ventrals, 107 caudals, 9–9 supralabials (fourth, fifth, and sixth entering orbit), 10–10 infralabials, 1–1 preoculars, 2–2 post-oculars, and 2–2 temporals.

Remarks.—Hartweg and Oliver (1940, p. 21) give the counts of seven specimens with complete tails, and 13 of the series in the National Museum also have complete tails. In these 20 specimens the range of variation is from 103 to 112. Tail counts on 10 *stuarti* from Chiapas, Guerrero, and Colima show a variation of from 113 to 118. The caudals of Tres Mariás Islands specimens (*slevini*) may be as few as 105, but these are differentiated by another character (anterior ventral pattern).

DRYADOPHIS MELANOLOMUS VERAECRUCIS Stuart

Four specimens were secured, at Potrero Viejo (Nos. 110895-6) and Cuautlapan (Nos. 110897-8), Veracruz. All are males, with the following scale counts (in the order given above): Ventrals 176, 179, 171, 177; caudals 104+, 112, 115, 110; supralabials 9-9, 9-9, 8-9, 9-9; infralabials 11-11, 10-11, 10-11, 10-11; preoculars 1-1; postoculars 2-2; temporals 2-2. The two Cuautlapan specimens (both young) differ from all other young and subadults by completely lacking light cross-bars. In their stead are two dorsolateral light lines, one on each side, running between the fifth and sixth scale rows; these lines are visible only anteriorly. They are faintly indicated in one of the Potrero specimens, which also has light cross bands anteriorly.

The Museum has eight other specimens, from Tabasco (Teapa, No. 46592) and Veracruz (Catemaco, Nos. 46478-9; Jalapa, No. 5346; Mirador, No. 25007; Orizaba (?), No. 30357; San Rafael, Jicaltepec, No. 32162; Tuxpan, No. 25194).

***DRYMARCHON CORAIS CLEOFÆE** Brock

The Museum has a single specimen (No. 24683)³⁰ from María Madre Island, Tres Mariás Islands.

DRYMARCHON CORAIS EREBENNUS (Cope)

Drymarchon corais ercbennus SMITH, Journ. Washington Acad. Sci., vol. 31, pp. 478-479, 1941.

Six specimens were collected, at three localities: Hacienda La Clementina, near Forlón, Tamaulipas (Nos. 105307-8, 110866-7); 5 km. south of Chapulhuacán, Hidalgo (No. 110868); and Huichihuayán, San Luis Potosí (No. 110869).

The Museum has three others from Mexico: No. 1859 from Matamoros, Tamaulipas; No. 25200 from Tuxpan, Veracruz; and No. 37515 from Sabinas, Coahuila.

³⁰ Smith, 1941r, p. 475.

DRYMARCHON CORAIS MELANOCERCUS Smith

Drymarchon corais melanocercus SMITH, Journ. Washington Acad. Sci., vol. 31, pp. 473-474, 1941.

Four specimens were secured: Nos. 110872-3 at Piedras Negras, Guatemala; No. 110870 at Tenosique, Tabasco; and No. 110871 at Palenque, Chiapas. A very large specimen found at Piedras Negras measured 8 feet 9 inches in total length, in life.

The Museum has four other typical Mexican specimens, from Mexico (No. 1416); Yucatán (No. 6554); Chichen Itzá, Yucatán (No. 46393); and Mirador, Veracruz (No. 25093). One specimen (No. 46447), from Metlatoyuca, Puebla, is an intergrade with *erebennus*; its color is like that of *melanocercus*, with which it may be associated.

Two specimens collected at Tonalá, Chiapas (Nos. 110875-6) and one from near Escuintla (La Esperanza), Chiapas (No. 110874), appear to be intergrades between *rubidus* and *melanocercus*; for geographic reasons it seems best to associate them with the latter race. Like them are four others in the Museum: No. 30526 from El Barrio, No. 46496 from Santa Efigenia; No. 61959 from "Tehuantepec," Oaxaca; and No. 46587 from Valley of Comitán, Chiapas. These presumed intergrades may well be considered eventually as a distinct race.

DRYMARCHON CORAIS ORIZABENSIS (Dugès)

Drymarchon corais orizabensis SMITH, Journ. Washington Acad. Sci., vol. 31, pp. 477-478, 1941.

A single specimen, No. 110886, is from Potrero Viejo, Veracruz, collected by Dyfrig McH. Forbes.

The Museum has one other typical specimen, No. 24999, from Mirador, Veracruz. Included in the same series (Nos. 25000-3) are four specimens that appear to be intergrades between *melanocercus* and *orizabensis*; I consider that they more closely approach the latter than the former.

DRYMARCHON CORAIS RUBIDUS Smith

Drymarchon corais rubidus SMITH, Journ. Washington Acad. Sci., vol. 31, pp. 474-476, 1941.

Nine specimens were taken: OAXACA: Ixtepec (No. 110885); Tres Cruces (No. 110880); Tehuantepec (Nos. 110881-4); Cerro Arenal (Nos. 110878-9). PUEBLA: San Diego, south of Tehuacán (No. 110977).

The Museum has six other typical specimens: Rosario, Sinaloa (No. 46430, type); San Sebastián, Jalisco (No. 46588); Colima (Nos. 61948-9); Acapulco, Guerrero (No. 46538); and Tehuantepec, Oaxaca (No. 30425). Another specimen, from María Madre Island (No. 24683),

tentatively referred previously to this race, is *Drymarchon corais cleofae* Brock.

DRYMARCHON CORAIS UNICOLOR Smith

Drymarchon corais unicolor SMITH, Journ. Washington Acad. Sci., vol. 31, pp. 470-472, 1941.

Two specimens were collected, one near La Esperanza (near Escuintla), Chiapas (No. 110865), and one at Colonia Hidalgo, 8 km. north of La Esperanza (HMS No. 14556).

The Museum has three other Mexican specimens, from "Tehuantepec" (No. 30424); Huchuctan, Chiapas (No. 46464); and "Mexico" (No. 39051).

DRYMOBIUS CHLOROTICUS (Cope)

Two specimens were taken, one on Cerro Ovando, 5,000 feet, Chiapas (No. 110824), the other from Finca Juárez, 3,000 feet, Chiapas (No. 110825). These are, respectively, male and female; ventrals 158, 168; caudals 91+, 125; supralabials 9-9; infralabials 10-11, 10-10; preoculars 1-1; postoculars 2-2; temporals 2-2.

The Ovando specimen was found under a small piece of wood, preparing to shed (eyes translucent, nearly opaque). The Juárez specimen was found on the ground beneath bushes.

The hemipenes of the Ovando specimen agree perfectly with the generic characters of *Drymobius* as redefined by Stuart (1932, pp. 1-16, pls. 1-5), as does also the number of maxillary teeth (31) of the same specimen. However, this number is considerably greater than that given by Boulenger (1894, p. 16), who says the teeth number no more than 25. The ventral and caudal counts, however, agree with those of *chloroticus* (Stuart, 1933, p. 10).

The Museum has one other Mexican specimen, from Tuxtla Volcano, San Andrés, Veracruz (No. 46404).

DRYMOBIUS MARGARITIFERUS MARGARITIFERUS (Schlegel)

Drymobius margaritiferus margaritiferus SMITH, Proc. U. S. Nat. Mus., vol. 92, p. 393, 1942.

Thirteen specimens were collected, as follows: VERACRUZ: Cuautlan (Nos. 110828-33); Potrero Viejo (Nos. 110826-7); Orizaba (No. 110834). TABASCO: Tenosique (No. 110835). CHIAPAS: San Juanito, near Palenque (No. 110835); Tonalá (No. 110836). GUATEMALA: Piedras Negras, Petén (No. 110838).

The fact that the southernmost specimens, from Tonalá, Piedras Negras, and Tenosique, have the lowest ventral counts probably has some significance; the present series is not sufficiently large to warrant segregation of two races, however. The scale rows are regularly 17-15, with the exception of one (No. 110829) with 13 scale rows near the

anus; the preoculars are uniformly 1-1, the postoculars 2-2; the temporals are 2-1 in one, 1-2 in another, and 2-2 in the remainder.

The Piedras Negras specimen contained in its stomach two *Eleutherodactylus rhodopis*, one *E. alfredi*, two *Syrrhopus*, and one other unidentifiable amphibian.

TABLE 11.—Variation in *Drymobius margaritiferus margaritiferus*

U.S.N.M. No.	Sex	Ventrals	Caudals	Supralabials	Infralabials	Labials enter eye
110826	♀	-----	114	9-9	10-11	4-5-6
110831	♀	153	-----	9-9	10-10	4-5-6
110836	♀	152	-----	9-10	10-10	4-5-6
110838	♀	148	105	9-9	10-11	4-5-6
110827	♂	152	123	9-9	11-11	4-5-6
110828	♂	152	131	9-9	11-11	4-5-6
110829	♂	150	127	9-9	10-11	4-5-6
110830	♂	158	123	9-9	11-11	4-5-6
110832	♂	155	128	9-9	10-10	4-5-6
110833	♂	152	125	9-9	10-10	4-5-6
110834	♂	155	120	9-9	-----	4-5-6
110835	♂	145	-----	9-9	10-?	4-5-6
110837	♂	143	-----	9-9	10-10	4-5-6

The Museum has 23 other Mexican specimens, as follows: CAMPECHE: Campeche (No. 46454). CHIAPAS: El Salto (No. 46510). SAN LUIS POTOSÍ (No. 46539). TABASCO (No. 6625). TAMAULIPAS: Altamira (Nos. 46540-1). VERACRUZ: Catemaco (No. 46480); Minatitlán (No. 64194 [Old no. 5254]); Mirador (Nos. 24996-7); Orizaba (Nos. 12119, 65436); San Rafael (No. 32161); Tuxpan (Nos. 25195-9). YUCATÁN: Chichen Itzá (No. 46572); Puerto Morelos (No. 46532). There are three other specimens from "Mexico" (Nos. 12088, 12099, 16396).

DRYMOBIUS MARGARITIFERUS FISTULOSUS Smith

Drymobius margaritiferus fistulosus SMITH, Proc. U. S. Nat. Mus., vol. 92, pp. 382-383, 1942.

Nineteen specimens, all from the vicinity of Tehuantepec, Oaxaca, are referred to this race, although they are so faded by long preservation in formalin that the details of scale pattern are largely obliterated. The precise localities are: Tehuantepec, Nos. 110839-47, 110859-60; Tres Cruces, No. 110848; Cerro Arenal, Nos. 110849-50; Ecurana, No. 110851; Rincón San Pedro, Nos. 110852-3; La Concepción, Nos. 110854-5.

The scale rows are uniformly 17-15, the preoculars 1-1, and the postoculars 2-2; the temporals are 1-2 in one, 2-1 on one side of one, and 2-2 in the others.

TABLE 12.—*Variation in Drymobius margaritiferus fistulosus*

U.S.N.M. No.	Sex	Ventrals	Caudals	Supralabials	Infralabials	Labials enter eye
110839	♂	150	116	9-9	9-9	4-5-6
110840	♂	147	-----	8-8	9-9	3-4-5
110844	♂	150	-----	9-9	10-11	4-5-6
110845	♂	150	-----	9-9	11-11	4-5-6
110846	♂	148	117	9-9	10-10	4-5-6
110849	♂	149	-----	9-9	10-10	4-5-6
110850	♂	146	-----	9-9	11-11	4-5-6
110852	♂	150	125	9-9	10-10	4-5-6
110854	♂	150	142	9-10	11-11	4/5-5/6-6/7
110860	♂	152	117	8-9	11-10	3/4-4/5-5/6
110841	♀	149	115	9-9	10-10	4-5-6
110842	♀	149	-----	9-9	10-10	4-5-6
110843	♀	149	113	9-9	10-10	4-5-6
110847	♀	149	-----	9-9	9-10	4-5-6
110848	♀	150	126	9-9	10-10	4-5-6
110851	♀	149	125	9-9	10-11	4-5-6
110853	♀	152	121	9-9	10-11	4-5-6
110855	♀	150	-----	9-9	10-10	4-5-6
110859	♀	151	112	9-9	10-10	4-5-6

The Museum has eight other specimens, from Miramar, Nayarit (No. 51480, type), Colima (Nos. 31480-3, 56163), Tehuantepec, Oaxaca (No. 30484), and Puente de Ixtla (No. 46545).

DRYMOBIUS MARGARITIFERUS OCCIDENTALIS Bocourt

Drymobius margaritiferus occidentalis SMITH, Proc. U. S. Nat. Mus., vol. 92, p. 383, 1942.

Seven specimens, all from southern Chiapas near Escuintla, were collected: Cruz de Piedra (Nos. 110861-2); Rancho Las Gradadas (No. 110863); La Esperanza (Nos. 110856-8, 110864). Table 13 gives variation in certain characters.

TABLE 13.—*Variation in Drymobius margaritiferus occidentalis*

U.S.N.M. No.	Sex	Ventrals	Caudals	Supralabials	Infralabials	Labials enter eye
110856	♀	148	118	9-9	11-11	4-5-6
110857	♀	143	123	9-10	11-11	4/5-5/6-6/7
110862	♀	145	115	9-9	11-11	4-5-6
110858	♂	147	121	9-9	11-11	4-5-6
110861	♂	145	-----	9-9	11-11	4-5-6
110863	♂	140?	122	9-9	10-10	4-5-6
110864	♂	148	-----	9-9	11-11	4-5-6

The scale rows are uniformly 17-15, the preoculars 1-1, the postoculars 2-2, and the anterior temporals 2-2. The ventrals average somewhat fewer than in *fstulosus*.

The Museum has no other specimens from Mexico.

*ELAPHE BAIRDI (Yarrow)

The Museum has a single Mexican specimen, No. 103692, from Carbonero Canyon, Sierra del Carmen, Coahuila.³¹

ELAPHE CHLOROSOMA (Günther)

Three specimens (Nos. 110299-110301) are from Tres Cruces, Oaxaca. The scale characters of these in the order given are: Scale rows 27-33-21, 31-37-23, 29-34-23; ventrals 257, 281, 269; caudals 126 (♂), 105 (♀), 99+ (♀); supralabials 9-9, 8-9, 8-8; infralabials 11-11, 10-11, 11-12; labials entering eye 4-5(5-6), 4-5(5-6), 4-5(4-5). All are adults, lacking spots.

The Museum has one other, from Guanajuato (No. 11354).

ELAPHE FLAVIRUFA FLAVIRUFA (Cope)

Elaphe flavirufa flavirufa SMITH, Copeia, 1941, p. 133.

A single specimen (No. 110302) is from Potrero Viejo, Veracruz, collected by Dyfrig McH. Forbes. It is a male; scale rows 27-31-21; ventrals 254; caudals more than 108; supralabials 9-9, fourth, fifth, and sixth in contact with eye; infralabials 13-14; 38 blotches on body.

The Museum has four others, from Yucatán (No. 6566, type), Tabasco (No. 6626), Campeche? (No. 14848), and Mirador, Veracruz (No. 24998).

ELAPHE FLAVIRUFA MATUDAI Smith

Elaphe flavirufa matudai SMITH, Copeia, 1941, pp. 132-134, fig. 1.

One specimen, the type (No. 110303), was found crawling along a trail at night near Salto de Agua, at 1,200 feet, Cerro Ovando, Chiapas.

The Museum has no others.

ELAPHE LAETA LAETA (Baird and Girard)

Two specimens are in the collection, one from between Lerdo and La Goma, Durango (No. 105294), the other from 25 km. north of Monterrey, Nuevo León (No. 110434). Scale data on these two, respectively, are: Ventrals 228, 223; caudals 72 (♀), 81 (♂); scale rows 25-29-21, 25-27-19; supralabials 8-8, 8-9; infralabials 13-?, 14-14; labials enter eye, 4-5, 4-5 (5-6); dorsal blotches, 43 and 34, on body.

³¹ Smith, 1938, p. 150.

The Museum has four other Mexican specimens, from Santa Caterina, Nuevo León (No. 2263), and Chihuahua (Nos. 14223, 14253, 14284).

**ELAPHE TRIASPIS* (Cope)

Eight specimens are in the Museum, from Chichen Itzá, Yucatán (Nos. 46398, 46574-9), and Chilón, Chiapas (No. 46512).

ENULIUS SUMICHRASTI Bocourt

One specimen (No. 109913) was collected at night along a trail near La Esperanza, Chiapas. It is a male, with 185 ventrals and the tail incomplete; infralabials and supralabials 7-7; one postocular, the upper fused with the parietal.

This is a well-defined species, characterized chiefly by the shape of the enlarged rostral. The type apparently did not originate west of Tehuantepec, but probably from the east (the only other definite record is from Tonalá, Chiapas).

The Museum has no others of the species.

ENULIUS UNICOLOR (Fischer)

One specimen (No. 109912) is from Tres Cruces, Oaxaca. It is a male, with 174 ventrals, 125 caudals, and 7-7 supralabials and infralabials.

This species is well differentiated from *sumichrasti*, which has a distinctly larger rostral, but in that character it is very similar to *flavitorques*, which also has a smaller rostral. The only difference of any constancy I can find between *flavitorques* and *unicolor* is the presence in the former of a light nuchal collar, its absence in the latter. All known Mexican specimens are collarless, while the only collarless specimen of *flavitorques* of which I am aware is one in a series of five from Escuintla, Guatemala (No. 12694). None of this series shows any tendency toward the characters of *sumichrasti* in form of rostral. Eventually it may be possible to show some average differences between *flavitorques* and *unicolor* in scutellation.

E. murinus Bocourt (and therefore *longicaudatus* Cope) is based upon "Tehuantepec" specimens, which, according to the figure, correspond with the present specimen, and with two secured by Hartweg and Oliver (1940, p. 23). The species may not occur in the lowlands about Tehuantepec, but Dr. Hartweg has it from farther east along the Pacific coast.

The Museum has no others of the species.

*ERYTHROLAMPRUS AESCULAPII (Linnaeus)

One specimen in the Museum (No. 31283) is labeled "Guadalajara," Jalisco, without further comment or indication of collector. As there is no other precise record of this genus in Mexico, and the authority for the above specimen is unknown, I believe it unwise to accept this record as valid. It is a male, with 15 scale rows; ventrals 194; caudals 59; supralabials 7-7; infralabials 9-9; preoculars 1-1; postoculars 2-2; temporals 1-2; 16 pairs of black rings on body, 3 on tail. Scales in red areas black-tipped; red areas covering about 8 scale lengths; pairs of black rings usually complete about belly; scales between the rings of a single pair also black-tipped. Black rings covering $1\frac{1}{2}$ -2 scale lengths laterally, 2-2 $\frac{1}{2}$ dorsally; a whole pair, with its enclosed light rings, covers $5\frac{1}{2}$ -6 scale lengths. Belly with but a few flecks of black, aside from rings. Rings about tail very distinct ventrally. A large area on top of head dark; anterior edges of internasals and prefrontals, anterior and median edges of first and upper secondary temporals, anterior half of lower secondary temporal, and all except anterior upper edge of rostral, light cream; a curved, cream line near posterior edge of parietals; supralabials cream, except for dark posterior edges; posterior edges of a few anterior infralabials dark. First pair of black rings (nuchal) barely involving tips of parietals, and the two partially fused middorsally, thus interrupting the narrow light band between them.

In spite of the belief that acceptable evidence of the occurrence of this genus in Mexico is lacking, there are numerous vague references, summarized in the following synonymy, which refer only to "Mexico?" records:

- Erythrolamprus aesculapii* LICHTENSTEIN, Nomenclator . . . Berolinensis, p. 30, 1856.—MÜLLER, Reisen in den Vereinigten Staaten, Canada und Mexico, p. 607, 1865.—GÜNTHER, Biologia Centralia-Americana, Rept. Batr., p. 166, 1895.—BOULENGER, Catalogue of the snakes in the British Museum, vol. 3, pp. 200-204, 1896.—AMARAL, Mem. Inst. Butantan, vol. 4, p. 216, 1929.
- Erythrolamprus larvatus* JAN, Cenni sul Museo Civico di Milano, ed indice sistematico dei rettili ed anfibi esposti nel medecimo, p. 48, 1857 (*nomen nudum*).
- Erythrolamprus bizona* JAN, Arch. Zool., vol. 2, pp. 104, 105 (part), 1863.
- Erythrolamprus aesculapii bizona* JAN, Eleuco sistematico degli ofidi . . . , p. 55 (part), 1863.
- Erythrolamprus venustissimus* var. B. JAN, Cenni sul Museo Civico di Milano, ed indice sistematico dei rettili ed anfibi esposti nel medecimo, p. 48, 1857.
- Erythrolamprus venustissimus* var. D GÜNTHER, Catalogue of the snakes in the British Museum, pp. 47-48, 1858.—GARMAN, Bull. Essex Inst. vol. 16, p. 28, 1884.
- Erythrolamprus venustissimus* BOCOURET, Mission scientifique au Mexique et dans l'Amérique centrale, Rept., livr. 10, pp. 658-660, pl. 38, fig. 4, 1886.
- Erythrolamprus guentheri* GARMAN, Mem. Mus. Comp. Zool., vol. 8, p. 154, 1883 (for *E. venustissimus* var. D of Günther).

*FICIMIA OLIVACEA OLIVACEA Gray

Two specimens are in the Museum,³² including No. 6329 from Orizaba, Veracruz, and No. 30131 said to be from "Tehuantepec." The locality for the latter appears to be erroneous.

*FICIMIA OLIVACEA STRECKERI Taylor

Two specimens (Nos. 25201-2) are in the Museum, from Tuxpan, Veracruz.³³

FICIMIA PUBLIA Cope

Ficimia publia SMITH and TAYLOR, Journ. Washington Acad. Sci., vol. 31, pp. 362-364, 1941.

Four specimens were secured, at Piedras Negras, Guatemala (No. 110295), Tehuantepec, Oaxaca (No. 110297), La Concepción, Oaxaca (about 50 km. west of Tehuantepec) (No. 110298), and La Esperanza, near Escuintla, Chiapas (No. 110296). The Piedras Negras and La Esperanza specimens were found at night along trails through forests.

This species has not previously been reported from Pacific slopes north of the Isthmus of Tehuantepec, from where it is represented by M. C. Z. No. 33609 and U. M. M. Z. No. 85713, both from Chilpancingo, Guerrero, collected by W. W. Brown. The former has 34 blotches on the body, the latter 32. The ventrals are 156, 153; caudals 32 (♀), 36 (♂); supralabials 7-7, 7-7; infralabials 8-8, 7-8; preoculars 1-1; postoculars 2-2; total length 279 mm., 314 mm.; tail 39 mm., 50 mm., respectively. Both specimens have the internasals distinct. In pattern the specimens are like others of the species.

In spite of the discovery of typical *publia* in this region, it does not appear wise to consider *ruspator* a synonym of it, although if valid two closely related species would appear to occupy much the same territory. The number of blotches in the two known *ruspator* (43 to 45) is much higher than in any of the 19 *publia* for which this character is known (range 25 to 35).

The Museum has two other Mexican specimens, both from "Yucatán" (Nos. 16427-8).

*FICIMIA VARIEGATA (Günther)

A single specimen in the Museum is from Guichicovi, Oaxaca (No. 30126).³⁴

³² Smith and Taylor, 1941, pp. 366-367, figs. 4, 9, 13.

³³ Smith and Taylor, 1941, p. 368, figs. 3, 8, 14.

³⁴ Smith and Taylor, 1941, pp. 365-366.

GEAGRAS REDIMITUS Cope

Twenty-nine specimens were secured (Nos. 109876-902, HMS Nos. 12097, 15722), all from the vicinity of Tehuantepec, Oaxaca.

This curious snake bears no relationship to *Geophis*, near which it is allocated by Boulenger. It more nearly resembles *Tantilla*, as concluded by Dum. The maxillary teeth are 12 in number, thickened, and flattened at the tips; the two rear teeth are distinctly grooved, distinctly (although not greatly) enlarged, and are preceded by a short diastema. The hemipenis extends to the suture between the sixth and seventh caudals; the distal third (corresponding to two caudal lengths) is covered by calyces, and appears to be capitata; the median third is covered with nearly straight spines; the proximal third is spineless, ridged. The sulcus is single, not divided.

TABLE 14.—Variation in *Geagrass redimitus*

No.	Sex	Ventrals	Caudals	No.	Sex	Ventrals	Caudals
109876	♂	119	29	15722	♂	122	31
109877	♂	-----	29	109901	♂	117	29
109878	♂	122	28	109902	♂	123	29
12097	♂	124	30	109879	♀	113	29
109881	♂	123	33	109880	♀	115	28
109882	♂	119	28	109883	♀	113	26
109885	♂	119	32	109884	♀	114	26
109886	♂	122	32	109888	♀	113	26
109887	♂	124	30	109889	♀	114	27
109890	♂	118	29	109892	♀	114	28
109891	♂	120	28	109893	♀	117	-----
109895	♂	121	29	109894	♀	116	29
109896	♂	124	28	109898	♀	119	27
109897	♂	121	26	109900	♀	113	-----
109899	♂	120	29				

The Museum has one other, the type, from Tehuantepec (No. 30115).³⁵

*GEOPHIS ANOCULARIS Dunn

A single specimen, the type, is in the Museum, from Totontepec, Oaxaca (No. 46556).³⁶

GEOPHIS BLANCHARDI Taylor and Smith

Four specimens (Nos. 109936-9) are from the type locality, 2 miles southwest of Acultzingo, Veracruz. The ventrals and caudals, re-

³⁵ Cope, 1876, p. 141.

³⁶ Dunn, 1920, pp. 127-128.

spectively, of these are: ♀, 161 ?; ♀, 165, 34; ♂, 152, 38; ♂, 150, 37. A distinct difference is indicated between the sexes in these counts. Supralabials 6-6 in all; infralabials 7-7 except in one, which has 6-7; third and fourth labials entering orbit in all; mental separated from chin shields; posterior pair of chin shields slightly smaller than anterior in one, three-quarters as large in another, two-thirds in one, and one-half in the other. Belly checkered, the light area about equal in extent to the black area, or somewhat greater.

These specimens were found under stones on grassy hillsides, at the summit of the ridge in the Sierra Madre Oriental.

The Museum has no others of the species.

**GEOPHIS CANCELLATUS* Smith

Two specimens³⁷ are in the Museum, including the type (No. 46440) from Chicharras, Chiapas, and one paratype (No. 46441), probably from the same locality.

**GEOPHIS CHALYBEUS* (Wagler)

Three specimens, cotypes of *Rhabdosoma guttulatum* Cope, are in the Museum, from Mirador, Veracruz (Nos. 25024-5, 30399).³⁸

GEOPHIS MUTITORQUES (Cope)

Geophis mutitorques SMITH, Proc. New England Zool. Club, vol. 18, pp. 53-55, 1941.

Six specimens were collected, all at Pan de Olla, Veracruz (near Teziutlán, Puebla) (Nos. 109940-4, HMS 13074). These have been discussed elsewhere.

Three specimens from near Zacatlán, Puebla (Amer. Mus. Nat. Hist. Nos. 14218, 15251, 19773) add somewhat to the knowledge of the range of variation in the species. All are males, with 161, 158, 157 ventrals, respectively; 41, 34, 40 caudals; 6-6, 5-6, 6-6 supralabials; 7-7 infralabials; 0-0 preoculars; 1-1 postoculars; 1-2 temporals; posterior chin shields in contact.

The Museum has no others of the species.

**GEOPHIS NASALIS* (Cope)

Two specimens (Nos. 46611, 46613) in the Museum are from Chicharras, Chiapas.³⁹

³⁷ Smith, 1941a, pp. 1-2.

³⁸ Cope, 1885b, p. 385; Smith, 1941a, pp. 3, 6.

³⁹ Smith, 1941a, pp. 4-5.

GEOPHIS OMILTEMANA Günther

Geophis omiltemana SMITH, Proc. New England Zool. Club, vol. 18, p. 51, 1941 (footnote).

One specimen (No. 109945) is from Omilteme, Guerrero, collected by E. H. Taylor. Scales in 17 rows; ventrals 148; caudals 45; male. Supralabials 6-6; infralabials indeterminate; third and fourth labials entering orbit; chin shields separated from mental. Color as described for the species.

The Museum has no others of the species.

*GEOPHIS ROSTRALIS (Jan)

Two specimens in the Museum (Nos. 31351-2) are from "Mexico." The scale rows are 17, supralabials and infralabials 6-6, in each; respectively the ventrals are 137, 138, caudals 48 ♂, 43.

GEOPHIS SEMIDOLIATUS (Duméril and Bibron)

Of this species 349 specimens were collected, of which Nos. 109968-110294 are from Cuautlapan, Veracruz, and Nos. 109946-67 from Potrero Viejo, Veracruz. These were invariably found in banana patches under fallen banana trunks or under débris. They are rarely found in the dry season but are common after the rains start.

The Museum has 11 other specimens, from Mirador (Nos. 12114, 25026-8), hills west of Veracruz (No. 5315), and Orizaba (No. 12118), Veracruz; and "Mexico" (Nos. 7294, 12090, 12307, 12485, 12732).

*HETERODON NASICUS NASICUS Baird and Girard

The Museum has a single specimen (No. 61954) from "Sonora."

HETERODON NASICUS KENNERLYI Kennicott

Six specimens in the collection are as follows: Progreso, Chihuahua (No. 104665); 17 miles west of Carmen, Chihuahua (No. 105290); 13 miles west of San Pedro, Coahuila (Nos. 105296-9).

TABLE 15.—Variation in *Heterodon nasicus kenneerlyi*

U.S.N.M. No.	Sex	Ventrals	Caudals	Supralabials	Azygous scales	Accessory scales	Loreals
104665	♀	144	31	8-8	1	3	1-1
105290	♀	143	31	8-8	1	3	1-1
105296	♀	142	29	8-8	1	3	1-2
105297	♂	134	42	8-8	1	2	1-2
105298	♂	137	41	8-8	1	4	1-2
105299	♂	138	40	8-8	1	2	1-1

Five other specimens in the Museum are like the above: No. 1282(2), Matamoros, Tamaulipas; No. 17531, Corralitos, Chihuahua; No. 56132, Chihuahua; and No. 60044, Tlahualilo, Durango. These five have two to five accessory scales; one has no azygous scale; one has two loreals, the others one. These specimens and those reported by Dunkle and Smith (1937, pp. 9–10) outline very well the geographic distribution of *kennerlyi*, which occurs in southern New Mexico, western Texas, and northern Mexico east of western Chihuahua to the exclusion of other forms.

However, a specimen from "Sonora" (collected by Jenkins and Evermann, No. 61954) has 3–4 loreals and 16 azygous scales, and accordingly cannot be considered *kennerlyi*. I have examined several similar Arizona specimens. I cannot observe readily definable differences between these and typical *nasicus*, to which I refer them. The area occupied by them in Sonora and Arizona no doubt borders the western edge of the range of *kennerlyi*, and it is conceivable that the southwestern and northern ranges of *nasicus* are continuous through northern New Mexico. The southwestern population is most curiously situated, however, and may perhaps have characters, not now defined, that will separate it from other *n. nasicus*.

*HYPSIGLENA OCHRORHYNCHUS OCHRORHYNCHUS Cope

The Museum has a single specimen, No. 14287, from "Chihuahua." It is a female with 21–21–15 scale rows, 168 ventrals, 46 caudals, 8–8 supralabials, 10–10 infralabials, 1–1 preoculars (no subpreocular), 2–2 postoculars, 1–2–3 temporals. The postocular stripe is partially interrupted near the angle of the jaws.

*HYPSIGLENA OCHRORHYNCHUS JANII (Dugès)

Four specimens in the Museum are from "Guanajuato" (Nos. 9889, 11369), Tupátaro, Michoacán (No. 46513),⁴⁰ and Río Verde, San Luis Potosí (No. 46444). These cannot be referred to *torquatus* or *affinis*, since they show no vestige of a light nuchal collar. They differ from typical *ochrorhynchus* at least in the large size of the nuchal spot, which covers 9 to 10 scale lengths, while northern specimens of the species have a considerably shorter nuchal spot or spots (2 to 6 scale lengths).

*HYPSIGLENA TORQUATA (Günther)

Two specimens⁴¹ in the Museum are from Colima (No. 31385) and San Blas, Nayarit (No. 51479). The nuchal light collar is well defined in both.

⁴⁰ Taylor, 1939b, p. 373.

⁴¹ Taylor, 1939b, pp. 372–373.

IMANTODES CENCHOA LEUCOMELAS Cope

Imantodes cenchoa leucomelas SMITH, Proc. U. S. Nat. Mus., vol. 92, pp. 384-385, 1942.

Fifteen specimens were taken, as follows: GUATEMALA: Piedras Negras (No. 110549). CHIAPAS: La Esperanza (No. 110538), Las Gradass (Nos. 110540-2), and La Magnolia (No. 110539), all near Escuintla; Palenque (Nos. 110535-7). TABASCO: Tenosique (No. 110548). VERACRUZ: Cuautlapan (Nos. 110544-7); Tezonapa (No. 110543).

TABLE 16.—Variation in *Imantodes cenchoa leucomelas*

U.S.N.M. No.	Sex	Ventrals	Caudals	Supra-labials	Preoculars	Postoculars	Temporals	Labials enter eye	Tail-body blotches
110535	♀	245	175	8-8	1-1	2-2	2-2	4-5	35-31
110536	♀	241	156	8-9	1-1	3-3	2-2	4/5-5/6	40-31
110537	♀	233	149	8-9	1-1	4-4	2-2	4/5-5/6	34-23
110538	♀	243	144	8-8	2-2	2-3	2-2	4-5	33-23
110539	♀	245	146	8-8	1-1	2-3	2-2	4-5	38-19
110541	♀	246	148	8-8	2-2	2-2	2-2	3-4-5	34-24
110544	♀	233	142	8-8	1-1	2-3	2-2	4-5/4	35-19
110546	♀	227	145	8-8	2-2	3-3	2-3	4-5	31-20
110549	♀	235	153	8-8	1-1	2-2	2-2	4-5	34-22
110540	♂	250	153	8-8	1-2	3-3	2-2	3-4-5	36-22
110542	♂	253	161	8-8	2-2	2-2	2-2	4-5	35-27
110543	♂	243	150	8-9	1-1	2-2	2-2	{ 3/4-4/5- 5/6 }	{ 37-24 }
110545	♂	243	147	8-8	1-2	2-3	2-2	3-4-5	35-26
110547	♂	243	155	8-8	1-1	2-3	1-2	3-4-5	34-25
110548	♂	243	-----	7-8	1-1	2-2	2-2	{ 3-4/3- 4-5 }	{ 32-? }

The Museum has five other Mexican specimens: No. 16395, "Mexico"; Nos. 25035-6,⁴² Mirador, Veracruz (cotypes of *leucomelas*); No. 25037, "Mexican Plateau"; and No. 46388, Otatitlán, Veracruz.

IMANTODES GEMMISTRATUS Cope

Imantodes gemmistratus SMITH, Proc. U. S. Nat. Mus., vol. 92, pp. 385-386, 1942.

One specimen (No. 110521) is from La Esperanza, near Escuintla, Chiapas. It was found at night crawling on the ground and contained an *Anolis sericeus*. Female, with ventrals indeterminate; caudals 114; preoculars 1-1; supralabials 8-8, third, fourth, and fifth entering orbit; anterior temporals 1-1; 61 bands on body.

The Museum has no other Mexican specimens.

⁴² Cope, 1861, p. 296.

**IMANTODES LATISTRATUS* (Cope)

The Museum has one specimen (one of two cotypes) from Guadalajara, Jalisco (No. 24963),⁴³ and three others (Nos. 51481-3) from Miramar, Nayarit.

IMANTODES SPLENDIDUS LUCIODORSUS Oliver

Imantodes splendidus luciodorsus SMITH, Proc. U. S. Nat. Mus. vol. 92, p. 388, 1942.

Twelve specimens were collected, six at Palma Sola, Veracruz (Nos. 110529-34), and six at Palenque, Chiapas (Nos. 110522-7). All were found in dead, dry bromelias, during the dry season.

TABLE 17.—*Variation in Imantodes splendidus luciodorsus*

U.S.N.M. No.	Sex	Ventrals	Caudals	Preoculars	Supra-labials	Labials enter eye	Temporals	Body spots
110534	♀	218	113+	1-1	9-9	4-5-6	1-1	42
110530	♀	224	114+	1-1	8-8	3-4-5	1-1	51
110533	♀	225	-----	1-1	8-8	3-4-5	1-1	42
110522	♀	219	118	1-1	8-8	3-4-5	1-1	48
110526	♀	205	113	1-1	8-8	3-4-5	1-1	45
110523	♂	215	121	1-1	8-8	3-4-5	1-1	43
110524	♂	216	126	1-1	8-8	3-4-5	1-1	49
110525	♂	217	124	1-1	8-8	3-4-5	1-1	51
110527	♂	217	118	1-1	8-8	3-4-5	1-1	47
110529	♂	221	124	1-1	8-8	3-4-5	2-2	48
110531	♂	225	129	1-1	8-8	3-4-5	2-2	52
110532	♂	225	134	1-1	8-8	3-4-5	1-1	45

The Museum has no other specimens of this race.

IMANTODES SPLENDIDUS OLIVERI Smith

Imantodes splendidus oliveri SMITH, Proc. U. S. Nat. Mus., vol. 92, pp. 388-390, 1942.

A single specimen (No. 110528) was collected, near Tonalá, Chiapas. It was found at night crawling on the ground at the bank of a small stream, during the dry season.

The Museum has nine other specimens referred to this race: Nos. 12443, 30164-6, 30178-9, Tehuantepec, Oaxaca; and Nos. 30386-8, Juchitán, Oaxaca.

⁴³ Cope, 1887, p. 68.

TABLE 18.—*Variation in Imantodes splendidus oliveri*

U S.N.M. No.	Sex	Ventrals	Caudals	Preoculars	Supralabials	Labials enter eye	Temporals	Spots
12443	♀	230	125	1-1	8-8	3-4-5	1-1	54
30164	♀	229	117	1-1	8-8	4-5	1-1	59
30165	♀	229	118	1-1	8-8	4-5	1-1	67
30166	♀	234	123+	1-1	8-8	4-5	1-1	52
30178	♀	227	130	1-1	8-8	3-4-5	1-1	58
30179	♀	226	105+?	1-1	8-8	3-4-5	1-1	47
30386	♀	224	117+	1-1	8-8	4-5	1-1	47
30387	♀	222	130	1-1	8-8	4-5	1-1	59
110528	♀	226	121	1-1	8-8	3-4-5	1-1	55
30388	♀	235	-----	1-1	8-8	3-4-5	1-1	60

***IMANTODES TENUISSIMUS Cope**

The Museum has two specimens, both from "Yucatán," including the type (No. 6563)⁴⁴ and a topotype (No. 24889).

LAMPROPELTIS ALTERNA (Brown)

Lampropeltis alterna SMITH, Copeia, 1941, p. 112; Proc. Rochester Acad. Sci., vol. 8, pp. 204-206, 1942.

A single specimen (No. 110819) is from near Saltillo, Coahuila. The Museum has no others of the species.

LAMPROPELTIS GETULUS SPLENDIDA (Baird and Girard)

Three specimens (Nos. 104662-4) are from Río Santa María, near Progreso, Chihuahua. All are females, with 23-23-19 scale rows, 7-7 supralabials, 1-1 preoculars, 2-2 postoculars, and two primary temporals; ventrals 213, 213, 219, and caudals 40, 46, 48, respectively.

The Museum has no other Mexican specimens.

***LAMPROPELTIS GETULUS YUMENSIS Blanchard**

A single specimen in the Museum (No. 21720) is from Santo Domingo, Sonora.⁴⁵

***LAMPROPELTIS PYROMELANA (Cope)**

A single specimen in the Museum is from Dist. Guerrero, Chihuahua (No. 40063).⁴⁶

⁴⁴ Cope, 1867b, pp. 317-318.

⁴⁵ Blanchard, 1921, p. 74.

⁴⁶ Blanchard, 1921, p. 235.

*LAMPROPELTIS RUTHVENI Blanchard

A single specimen, the type (No. 46558), is in the Museum, from Pátzcuaro, Michoacán.⁴⁷

*LAMPROPELTIS TRIANGULUM ANNULATA Kennicott

Three specimens are in the Museum, including No. 425 from "Mexico," No. 1845 from Monterrey, Nuevo León, and No. 37535 from Montemorelos, Nuevo León.⁴⁸

LAMPROPELTIS TRIANGULUM ARCIFERA (Werner)

Lampropeltis triangulum arcifera SMITH, Proc. Rochester Acad. Sci., vol. 8, pp. 198-199, pl. 1, fig. 1, 1942.

One specimen (No. 110823) is from the city golf links of Orizaba, Veracruz (presented by friends). It is a male; scale rows 21-21-17; ventrals 223; caudals 55; supralabials 7-7; infralabials 8-8; preoculars 1-1; postoculars 2-2; temporals 2-3; white bands (including nuchal) 28.

The Museum has three others: One from Orizaba, Veracruz (No. 30222), the others from "Mexico" (Nos. 1854, 32278).

*LAMPROPELTIS TRIANGULUM NELSONI Blanchard

Ten specimens are in the Museum, including: Nos. 31492-4, Colima; No. 12680, Guanajuato; No. 46552, Acámbaro, Guanajuato (type); Nos. 24967-8, Guadalajara, Jalisco; No. 31491, Neshpa River, Sierra Madre, Michoacán; and Nos. 30504-5, "Mexican Plateau."⁴⁹

*LAMPROPELTIS TRIANGULUM OLIGOZONA (Bocourt)

Two specimens (Smith, 1942d, pp. 201-202) are in the Museum: One (No. 46439) is from Huehuetán, Chiapas, and the other (No. 62210) lacks precise locality data (collected by Sumichrast).

LAMPROPELTIS TRIANGULUM POLYZONA Cope

Lampropeltis triangulum polyzona SMITH, Proc. Rochester Acad. Sci., vol. 8, pp. 200-202, 1942.

Three specimens are in the collection, two from Potrero Viejo, Veracruz (Nos. 110820-1), and one from Palma Sola, Veracruz (No. 110822). The latter was found in a bromelia; all were collected by Dyfrig McH. Forbes. Ventrals 230, 221, 229, respectively; caudals

⁴⁷ Blanchard, 1920, p. 8, pl. 1, fig. 2.

⁴⁸ Blanchard, 1921, p. 164.

⁴⁹ Blanchard, 1921, p. 158.

58, 60, 50; supralabials 7-7; infralabials 9-9; preoculars 1-1; postoculars 2-2; temporals 2-3; white bands (including nuchal) 26, 32, 23.

The Museum has 16 others, all (with definite locality) from the state of Veracruz: Minatitlán, No. 5254; Mirador, Nos. 6370, 25008-12; Orizaba, Nos. 7103(2), 12121, 61026; Tuxpan, Nos. 25192-3; no locality, Nos. 4506, 11377, 12487.

*LAMPROPELTIS TRIANGULUM SCHMIDTI Stuart

The Museum has a single specimen, No. 24684, from María Madre Island, Tres Mariás Islands.⁵⁰

TABLE 19.—*Variation in Leptodeira annulata polysticta*

U.S.N.M. No.	Sex	Scale rows	Ventrals	Caudals	Preoculars	Body spots
111224	♀	21-23-17	206	86	3-3	51
111229	♀	21-23-16	211	82	1-2	59
111231	♀	21-23-17	197	84	2-2	54
111232	♀	21-23-15	199	85	2-3	57
111236	♀	21-23-15	207	89	3-3	59
111237	♀	21-23-16	201	79	3-3	61
111242	♀	21-23-15	203	-----	2-3	61
111247	♀	21-23-16	206	84	3-3	62
111249	♀	21-23-14	205	87	3-3	55
111250	♀	21-23-17	205	-----	3-3	64
111225	♂	21-21-15	202	-----	3-3	54
111226	♂	21-23-16	195	97	3-3	54
111227	♂	21-23-16	200	97+	3-3	50
111228	♂	21-23-15	204	93	3-3	58
111230	♂	21-23-15	200	98	2-3	61
111233	♂	21-23-15	205	91	3-3	54
111234	♂	21-23-15	204	-----	2-2	57
111235	♂	19-23-15	205	92	2-3	54
111238	♂	20-22-15	205	96	3-3	59
111239	♂	19-23-14	200	90	3-3	60
111240	♂	18-23-15	196	93	3-3	61
111241	♂	21-23-16	201	94	3-3	58
111243	♂	21-23-16	205	98	2-2	56
111244	♂	21-23-15	199	93	1-2	60
111245	♂	21-23-15	198	-----	3-3	58
111246	♂	21-23-15	202	96	2-3	66
111248	♂	20-23-15	203	88	3-3	50
111251	♂	21-23-16	200	90	2-3	57
111252	♂	21-23-15	200	97	3-3	59
111253	♂	19-23-15	204	89	3-3	59
111254	♂	21-23-15	200	-----	2-3	50

⁵⁰ Blanchard, 1921, p. 158.

LEPTODEIRA ANNULATA POLYSTICTA Günther

Thirty-one specimens are from the following localities: CHIAPAS: Near Escuintla (Las Nubes, Cerro Ovando, Nos. 111228-30; Salto de Agua, Cerro Ovando, Nos. 111231-8; La Esperanza, Nos. 111239-41; Rancho Las Gradass, Nos. 111242-3; La Magnolia, No. 111244; Finca Juárez, Nos. 111245-54). GUERRERO: Agua del Obispo, No. 111224. OAXACA: La Concepción, No. 111226; Lachiguiri, 7,100 feet, No. 111225. GUATEMALA: Piedras Negras, No. 111227. Nearly all were found at night by means of a lantern. One was climbing a tree trunk (Piedras Negras); two were on top of calladium leaves, searching for frogs and salamanders (La Esperanza) that were common on the leaves; many were found in arroyos, where frogs were abundant; and the ten from Finca Juárez were found climbing about in trees looking for and eating the eggs of *Agalychnis moreletii*. One was found during the day, in the axil of a calladium (Agua del Obispo). All except one were found in the dry season, when they congregate about arroyos.

All have 8-8 supralabials and 2-2 postoculars; one has 1-3-4 temporals, another 1-3-4 on one side, and another 1-3-3 on one side, but except for these the temporals are uniformly 1-2-3. The infralabials are 10-11 in four, 10-12 in one, 11-11 in three, and 10-10 in the remainder. Other data on variation are given in table 19.

The Museum has no others from Mexico.

*LEPTODEIRA ANNULATA SEPTENTRIONALIS (Kennicott)

The Museum has eight specimens,⁵¹ two of which (No. 4267) are the cotypes from Matamoros, Tamaulipas; another specimen (No. 4273) is from the same locality, and five others (Nos. 25206-7, 25209-11) are from Tuxpan, Veracruz.

LEPTODEIRA ANNULATA TAYLORI Smith

Leptodeira annulata taylori SMITH, Proc. Biol. Soc. Washington, vol. 54, pp. 115-118, 1941.

A single specimen, a paratype of *taylori* (No. 111257), was collected. It was found in a bromelia.

The Museum has 10 other typical specimens: Nos. 30208 (type), 30207, 7088, Orizaba, Veracruz; No. 30508, "Veracruz"; No. 65154, hills west of Veracruz, Veracruz; and No. 12113 (5), Mirador, Veracruz. Another specimen, an intergrade with *septentrionalis*, is No. 25211 from Tuxpan, Veracruz.

*LEPTODEIRA BRESSONI Taylor

A single specimen (No. 46459) in the Museum is from Plomosas, Sinaloa.⁵²

⁵¹ Taylor, 1939a, pp. 329-331.

⁵² Taylor, 1939a, p. 324.

LEPTODEIRA FRENATA (Cope)

Leptodeira frenata SMITH. Proc. Biol. Soc. Washington, vol. 52, pp. 192-195, fig. 8, 1939.

Three specimens (Nos. 111193-4, HMS No. 3771) are from Palma Sola, Veracruz. They were found in bromelias in the dry season.

This form shows a great similarity to *y. yucatanensis*, even to the paired parietal spots and the fusion of the postocular stripe with the first dorsal blotch.

The Museum has no others of the species.

LEPTODEIRA MACULATA (Hallowell)

Twenty-six specimens were secured, as follows: CHIAPAS: Tonalá (Nos. 111216-8). GUERRERO: Acapulco (No. 111201); Coyuca (Nos. 111202-3); Tierra Colorado (Nos. 111204-5); Agua del Obispo (No. 111206). OAXACA: Cerro Arenal (No. 111214); Tehuantepec (Nos. 111207-13); Cerro Guengola (No. 111215). SAN LUIS POTOSÍ: Huichihuayán (Nos. 111219-20). VERACRUZ: Potrero Viejo (Nos. 111195-7); Palma Sola (Nos. 111198-200). Some were found in bromelias, others under bark on trees, others at night in arroyos.

One (No. 111208) from Tehuantepec agrees with the dark color phase described by Taylor (1939a, p. 339, pl. 32, fig. 1). The supralabials are uniformly 8-8; preoculars 1-1 in one, 1-2 in two, 2-3 in one, and 2-2 in the remainder, postoculars 2-2 in all; and temporals 1-2-3 in all except two, which have four posterior temporals. Other details of variation are given in table 20.

The Museum has 40 other specimens, all from Mexico except perhaps the type (No. 7367), which presumably is from Nicaragua. They are as follows: COLIMA: Orolata (No. 56344); Colima (Nos. 31426, 31485-90). GUERRERO: Acapulco (No. 46403); Coyuca (No. 46344). JALISCO: Guadalajara (No. 24962); Miramar (Nos. 51471-7); San Blas (No. 51478). OAXACA: Zanatepec (No. 46498); Santa Efigenia (No. 46497); Tehuantepec (Nos. 30306-7, 30480). SINALOA: Mazatlán (No. 6836); Rosario (No. 62201). VERACRUZ: Orizaba (Nos. 6324, 7095); hills west of Veracruz (No. 5317); Mirador (Nos. 6373, 25040, 61990-2); Tuxpan (No. 25208). INDEFINITE: "Mexico" (Nos. 11378, 16389, 32169); "Cape St. Lucas" (No. 11290).

Mus. Comp. Zool. No. 11420, from "Colima" (Glückert), has the fewest body spots (17-18) of any recorded in *maculata*, closely approaching *smithi* in this respect. Another (No. 11419) with the same locality data has 21-22 body spots, a number within the previously known range of the species.

TABLE 20.—*Variation in Leptodeira maculata*

U.S.N.M. No.	Sex	Scale rows	Ventrals	Caudals	Infralabials	Body-tail spots
111195	♂	?-??-17	174	67	?-?	28-14
111196	♂	21-23-17	178	68	10-10	27-13
111198	♂	21-23-16	175	67	10-10	28-11
111199	♂	21-23-17	173	63	10-10	26-11
111200	♂	21-23-17	179	68	10-10	32-14
111205	♂	21-23-17	167	75	10-10	27-13
111209	♂	21-23-16	174	81	10-10	37-16
111210	♂	21-23-16	173	81	10-10	31-12
111213	♂	21-25-17	174	72	10-10	30-14
111214	♂	21-25-17	170	74	10-11	35-14
111218	♂	21-23-16	172	70	10-10	29-15
111197	♀	23-25-17	181	59	10-10	27-10
111201	♀	23-23-17	177	72	10-10	33-12
111202	♀	22-25-17	172	71	9-9	31-15
111203	♀	23-25-17	176	70	10-10	36-15
111204	♀	21-23-17	177	68	10-10	38-15
111206	♀	21-23-17	174	-----	10-10	33-?
111207	♀	21-23-17	172	-----	11-11	33-?
111208	♀	21-23-16	174	69	9-10	32-13
111211	♀	21-23-17	179	62	10-10	38-13
111212	♀	21-23-17	172	67	10-10	29-11
111215	♀	21-23-17	174	62	10-10	48-13
111216	♀	21-23-17	175	62	10-10	35-12
111217	♀	21-23-17	171	64	10-10	29-13
111219	♀	21-23-17	170	60	10-10	25-8
111220	♀	23-25-17	170	55	10-10	24-7

LEPTODEIRA MYSTACINA Cope

Three specimens were secured, one (No. 111221) 3 miles north of Acapulco, Guerrero (under a flake on a boulder); one (No. 111222) from Cerro Arenal, Oaxaca (at night in an arroyo, hunting geckos); and one (No. 111223) on Cerro Guengola, Oaxaca. All have 19-19-17 scale rows; the ventrals are 193, 194, 193, respectively; caudals 75 (♂), ? (♀), 66+ (♀); preoculars and postoculars 2-2; temporals 1-2-3; spots on body 11, 11-13, 14-15; spots on tail 6-7 in No. 111223.

The Museum has three others, the types from Tehuantepec, Oaxaca (Nos. 30339-40),⁵³ and one from Acapulco, Guerrero (No. 46551).

*LEPTODEIRA PUNCTATA (Peters)

A single specimen, the type of *Leptodeira pacifica* Cope, is in the Museum (No. 6833), from Mazatlán, Sinaloa.⁵⁴

⁵³ Cope, 1869, p. 151.

⁵⁴ Cope, 1868b, p. 310.

LEPTODEIRA SMITHI Taylor

Two specimens (Nos. 111255-6) were secured 4 km. north of Apatztingán, Michoacán. They were found at night in an arroyo hunting frogs (*Hyla smithi*). These agree in detail with the description by Taylor. The scale rows are 21-21-17, 21-23-17, respectively; ventrals 169, 166; caudals 73+ (♂), 75 (♂); supralabials 8-8; infralabials 10-10; preoculars and postoculars 2-2; temporals 1-2-3; spots on body 13-14, 15; spots on tail 6-7, 6.

The Museum has no others of the species.

* LEPTODEIRA YUCATANENSIS YUCATANENSIS (Cope)

The Museum has three specimens, including the type (No. 24887)⁵⁵ from "Yucatán," and one other specimen (No. 46566) from the same locality; also No. 46397, Chichen Itzá, Yucatán.

LEPTODEIRA YUCATANENSIS MALLEISI Dunn and Stuart

Three specimens (Nos. 111258-60) are from Palenque, Chiapas. Data on these specimens, respectively, are: Scale rows 21-21-15, 21-21-15, 21-23-17; ventrals 181, 184, 182; caudals 79 (♂), 70 (♀), ? (♀); supralabials 8-8; infralabials 11-11 (or 10-10) in all; preoculars 2-2, 2-2, 1-2; postoculars 2-2, 2-2, 1-1; temporals 1-2-3 in all; anal divided; total length 627 mm., 567 mm., 414+mm.; tail length 143 mm., 118 mm., 82+mm.; rhombs on body and tail 30-16, 28-13, 29-13. The dorsal rhombs usually terminate laterally on the first scale row. The chin is stippled, the edges of the lower labials dark. Nape stripe is short and fails to reach the first dorsal rhomb by two or three scales. The temporal stripe from eye to first dorsal rhomb is completely broken on one side in one, and partially interrupted on both sides of another.

All were found in bromelias.

The Museum has no others from Mexico.

LEPTOPHIS DIPLTROPIS DIPLTROPIS (Günther)

Three specimens are in the collections, all from the state of Oaxaca: Escurana (No. 110550); San Pedro Quiéchapá (No. 110551); and La Concepción (No. 110552). All have 15-11 scale rows, 8-8 supralabials, 1-1 preoculars, 2-2 postoculars, and 1-2 temporals; respectively the ventrals are 178 (♀), 170 (♂), 176 (♂); caudals 145, 137+, 153+.

The Museum has three others, from Acaponeta, Nayarit (No. 46458), and Tehuantepec, Oaxaca (Nos. 30175-6).

The ventral counts of 30 mainland Mexican specimens vary from 165 to 181, and the caudal counts of 23 specimens from 126 to 161.

⁵⁵ Cope, 1866, p. 127.

It is noteworthy that two British Museum specimens, recorded by Boulenger (1894 p. 111), from the Tres Mariás Islands (collected by A. Forrer) have higher ventral (185, 186) and a higher caudal (160, 166) count than other specimens. This corresponds with the differences found between mainland *Drymarchon corais rubidus* and the Islands *D. m. cleofae*; between *Constrictor c. imperator* and *C. c. sigma*; *Dryadophis melanolomus stuarti* and *D. m. slevini*; *Lampropeltis triangulum blanchardi* and *L. t. schmidti*; *Masticophis flagellum striolatus* and *M. f. variolosus*; and completely restricted to the Islands, without close mainland relatives, is *Exelencophis nelsoni*. The only snakes known from the Tres Mariás Islands that do not show obvious differences from mainland specimens are *Oxybelis acuminatus*, *Pelamis platurus*, and *Agkistrodon bilineatus*; a rattlesnake is said to occur, but its identity is unknown (Stejneger, 1899, p. 71). Even some of these three, when known from more numerous specimens, may show differences not now apparent. The race of *Leptophis diplostropis* from Tres Mariás Islands, which lacks a name, is here called—

*LEPTOPHIS DIPILOTROPIS FORRERI, new subspecies

Type.—Brit. Mus. Nat. Hist. specimen *m* of Boulenger's Catalogue of Snakes, vol. 2, p. 111, 1894, from Tres Mariás Islands, collected by A. Forrer.

Paratype.—Specimen *n*, of the same Catalogue.

Diagnosis.—Like *Leptophis d. diplostropis*, except the ventral scales more numerous (185 to 186 as opposed to 165 to 181), and the caudal scales perhaps usually more numerous (160 to 166 as opposed to 126 to 161).

Description of type.—An adult male, with ventrals 185; caudals 160; otherwise as typical of the species.

LEPTOPHIS MEXICANUS MEXICANUS Duméril and Bibron

Seven specimens were secured: CHIAPAS: Aguacate, near Escuintla (No. 110555); Cruz de Piedra, near Escuintla (No. 110556); Tonalá (No. 110554). TABASCO: Tenosique (No. 110553). VERACRUZ: Mata de Caña, 25 miles southeast of Jalapa (No. 110557); San Juan de la Punta (No. 110558); Potrero Viejo (No. 110559). Scale rows 15-11 in all; supralabials 8-9 in two, 8-8 in others; infralabials 9-10 in one, 10-10 in one, 12-12 in one, 11-11 in the others; preoculars 2-2 in one (No. 110555), 1-1 in others; postoculars 2-2; temporals 1-2. Respectively the ventrals are 160 (♂), 151 (♂), 160 (♂), 155 (♂), 169 (♀), 164 (♀), 157 (♂); caudals 157, 149, 151, —, 167, 150+, 152+.

The Museum has two others, so identified but not checked by me, from Orizaba, Veracruz (No. 30493), and Altamira, Tamaulipas (No. 46524).

*LEPTOPHIS MEXICANUS YUCATANENSIS Oliver

The Museum has three specimens, from Chichen Itzá, Yucatán (No. 46567), and "Yucatán" (Nos. 24884-5), all paratypes (Oliver, 1942, p. 10).

*LEPTOTYPHLOPS DULCIS (Baird and Girard)

Two Mexican specimens are in the Museum, No. 4872 from Monterrey, Nuevo León, and No. 46580 from Bagdad, Tamaulipas.

*LEPTOTYPHLOPS HUMILIS DUGESII (Bocourt)

Three specimens are in the Museum, No. 26140 from "Mexico," No. 49632 from Talpa, Jalisco, and No. 48537 from "Guanajuato."⁵⁶

*LEPTOTYPHLOPS MYOPICA MYOPICA (Garman)

Two specimens are in the Museum, No. 7291 from Monterrey, Nuevo León, and No. 66886 from Panuco, Veracruz.

LEPTOTYPHLOPS PHENOPS PHENOPS (Cope)

Seventeen specimens were collected, from Palma Sola (10 miles east of San Juan de la Punta), Veracruz (Nos. 110308-11); vicinity of Tehuantepec, Oaxaca (Nos. 110312-21, IIMS Nos. 18584, 18597); Río Grande, 12 miles north of Nilttepec, Oaxaca (No. 110322).

The Museum has 18 other Mexican specimens, from Tehuantepec, Oaxaca (Nos. 12444, 30091-4, 30289-95, 30531-3, 46560), Jalpan, Querétaro (No. 46581), and Coatzacoalcos (Puerto Mexico), Veracruz (No. 61183).

The Veracruz specimens do not seem distinguishable from the Oaxaca ones. Most distinctive of all is the one from Jalpan, Querétaro, in which the pupil is not at all visible, there is no striping whatever, and the light marks so characteristic of the species, on the tail and head, are completely lacking. In scale counts it is normal, and until other specimens are available from the same region it is referred to this species and race. The Río Grande specimen approaches the character of *bakewelli* in having the rostral elongate and the first dorsal scale reduced, so that the rostral contacts the supraocular on one side (narrowly separated on the other). On the basis of the latter specimen, and because of geographic probability, *bakewelli* is considered a race of *phenops*.

The dorsal scales, from rostral to spine, and the subcaudals, respectively, are as follows: 12444, 238, 19; 30091, 243, 19; 30092, 236, 19; 30093, 234, 18; 30094, 248; ?; 30289, 254, 16; 30290, 247, 13; 30291, 237,

⁵⁶ Klauber, 1940, pp. 129-131.

16; 30292, 236, 18; 30293, 243, 19; 30294, 244, 18; 30531, 241, 18; 30532, 232, 20; 30533, 240, 16; 46560, 258, 14; 46581, 249, 19; 61183, 252, 22; 110308, 258, 15; 110309, 249, 19; 110310, 241, 19; 110311, 257, 17; 110312, 247, 21; 110313, 252, 13; 110314, 260, 17; 110315, 256, 14; 110316, 241, 19; 110317, 263, 14; 110318, 259, 17; 110319, 260, 16; 110320, 239, 20; 110321, 250, 16; 110322, 242, 13.

LEPTOTYPHLOPS PHENOPS BAKEWELLI Oliver

Three specimens were taken, one (No. 110305) at Chilpancingo, Guerrero, and two (Nos. 110306–7) at Acahuitzotla, Guerrero. Dorsal scales from rostral to spine 248, 259, 256, respectively; subcaudals 17, 18, 16, respectively.

The Museum has two others, No. 46340 from La Salada, Michoacán, and No. 30295 from Tehuantepec, Oaxaca. The former has no light spot on the head, 262 dorsals, and 19 subcaudals; the latter is normally marked and has 265 dorsals, 18 subcaudals.

LOXOCEMUS BICOLOR Cope

One specimen (No. 110324) is from Tehuantepec, Oaxaca. The scale rows are 31–33–25; ventrals 256; tail broken, female; supralabials 11–11; infralabials 14–14; preoculars 1–1; postoculars 2–3.

The Museum has one other, from "Nicaragua" (No. 16131).

LOXOCEMUS SUMICHRASTI Bocourt

One specimen (No. 110323) is from Acapulco, Guerrero. Scale rows 31–33–25; caudals 43, male; supralabials 11–11; preoculars 1–1; postoculars 3–3.

The Museum has three others, from Colima (No. 61924) and "Mexico" (Nos. 86639, 89387).

MANOLEPIS NASUTUS (Cope)

Eleven specimens were taken, all in the state of Oaxaca: Tres Cruces (Nos. 110336–7); Cruz de Piedra, 24 km. west of Salina Cruz (Nos. 110341–2); El Limón, 28 km. northwest of Tehuantepec (No. 110343); Tehuantepec (Nos. 110338–40); Las Pilas, 20 km. southwest of Tehuantepec (No. 110344); between Ingenio Santo Domingo and San Miguel Chimalapa (Nos. 110345–6).

These specimens uniformly have 19–19–15 scale rows; 8–8 supralabials; 1–2–3 temporals; and 0–0 loreals. The preoculars are 1–1 in all except one, which has 1–2; and the postoculars are 2–2 in all except two, which have 2–3. Variation in other characters is given in table 21.

The Museum has nine other specimens, from "Colima" (Nos. 31478–9, 56319); Acapulco, Guerrero (No. 46601); Magdalena, Jalisco

(No. 67372), San Geronimo (Ixtepec), Oaxaca (No. 46360), and Tehuantepec (No. 30086-8), Oaxaca.

TABLE 21.—*Variation in Manolepis nasutus*

U.S.N.M. No.	Sex	Ventrals	Caudals	U.S.N.M. No.	Sex	Ventrals	Caudals
110336	♂	171	77	110338	♀	175	62
110337	♂	173	77	110340	♀	182	67
110339	♂	171	76	110341	♀	176	70
110345	♂	165	77	110342	♀	175	67
110346	♂	167	79	110343	♀	177	67
				110344	♀	178	71

*MASTICOPHIS BILINEATUS Jan

Six specimens are in the Museum, from Guaymas, Sonora (No. 15880; Batopilas, Chihuahua (No. 46382); San Juan Capistrano, Zacatecas (No. 46481); Pedro Pablo, Nayarit (No. 46417); Guadalajara, Jalisco (No. 32212); Cuicatlán, Oaxaca (No. 46499).⁵⁷

MASTICOPHIS FLAGELLUM TESTACEUS (Say)

Masticophis flagellum flavigularis SMITH, Journ. Washington Acad. Sci., vol. 31, p. 397, 1941.

One specimen was collected 15 miles north of Monterrey, Nuevo León (No. 111268).

The Museum has five others, as follows: Pesquería Grande (No. 1995) and Santa Caterina (No. 1992), Nuevo León; Mier, Tamaulipas (No. 48091); Chijol, San Luis Potosí (No. 46476); and San Bernardino Ranch, Sonora (No. 21052).

All have 8-8 supralabials, and 2-2 preoculars, postoculars and temporals. Respectively the scale rows are 17-12, ?-?, 17-13, 17-13, 17-12, and 17-13; ventrals 190 (♂), ?, 197, ? (♀), 193, 197; infralabials 10-11, 10-10, 10-10, 10-11, 10-11, 11-11. The tails are incomplete in all; two have counts of 100+ and 110+.

MASTICOPHIS FLAGELLUM LINEATULUS Smith

Masticophis flagellum lineatulus SMITH, Journ. Washington Acad. Sci., vol. 31, pp. 394-397, 1941.

Three specimens are from 11 miles north of San Buenaventura, Chihuahua (No. 105292, type) and from Progreso, near the Río Santa María, Chihuahua (Nos. 104675-6).

⁵⁷ Smith, 1941n, pp. 389-390.

The Museum has four other specimens from Mexico: No. 1988, Alamo de Parras, Coahuila; Nos. 14279, 14283, Chihuahua; and No. 46355, Guanacevi, Durango.

* *MASTICOPHIS FLAGELLUM PICEUS* (Cope)

A single specimen in the Museum, from Mexico, is labeled Altata, Sinaloa (No. 33570).

MASTICOPHIS FLAGELLUM STRIOLATUS (Mertens)

Masticophis flagellum striolatus SMITH, Journ. Washington Acad. Sci., vol. 31, 1941, pp. 393-394.

Two specimens were secured, one 10 km. south of Cuernavaca, Morelos (No. 111277), the other at Coyuca, near Acapulco, Guerrero (No. 111278).

The Museum has 18 other specimens, as follows: Acaponeta, Nayarit (No. 46483); Atemajac, Jalisco (No. 46386); Colima (Nos. 32178, 32221-2, 32232-4, 62027-9, 62031-4); Zacatula River, near Lauria, Guerrero (No. 32344); Sierra Madre, Chacán River, Michoacán (No. 62026); Hurcha Volcano, plains of Nuruapa, Michoacán (No. 62030).

All specimens have 17-13 scale rows, 2-2 preoculars and postoculars; the supralabials are 8-8 except in two (Nos. 32344, 62030), which have 9-9; and the temporals are 2-2 except in eight, which have three posterior temporals. Other data on variation are given in table 22.

TABLE 22.—*Variation in Masticophis flagellum striolatus*

U.S.N.M. No.	Sex	Ventrals	Caudals	Infralabials	U.S.N.M. No.	Sex	Ventrals	Caudals	Infralabials
32178	♀	187	-----	10-11	62031	♀	185	101+	10-10
32222	♀	190	105+	11-?	62033	♀	189	108+?	10-11
32232	♀	193	-----	10-10	32221	♂	183	-----	-----
32233	♀	192	116	-----	46483	♂	183	118+	10-11
32234	♀	190	110	9-10	62028	♂	189	125	10-11
32344	♀	189	115	10-10	62030	♂	189	118	10-10
46386	♀	194	112	11-11	62032	♂	183	123	10-10
62026	♀	191	113	10-11	62034	♂	193	99+	10-11
62027	♀	191	111+?	10-11	111277	♂	189	120+	-----
62029	♀	191	96+	10-11	111278	♂	184	117	10-10

Fifteen other counts on mainland specimens of this race are available in the literature (Boulenger, 1893, pp. 388-389; Oliver, 1937, p. 19; Taylor, 1938, pp. 524-525; Van Denburgh, 1897, p. 463). All counts available (35) show a total range of from 183 to 195 ventrals, sexed

specimens showing a variation of 184 to 194 in females, 183 to 193 in males; the single count of 195 is not sexed. These may be contrasted with 13 counts on specimens from the Tres Mariás Islands, which show a range from 192 to 197, sexed specimens showing a variation of from 192 to 197 in males, 195 to 197 in females. Seven of these counts (including the 197 ♂) are from Boulenger (*loc. cit.*) and may need verification. There is a distinct average difference between mainland and Tres Mariás Islands specimens in this character, however; only one female and one male from the mainland overlap the entire Islands series. Accordingly it appears that the Islands specimens represent a different race, which may be named—

*MASTICOPHIS FLAGELLUM VARIOLOSUS, new subspecies

Holotype.—U. S. N. M. No. 24681, an adult male skin from María Magdalena Island, Tres Mariás Islands.

Paratypes.—Twelve, including U. S. N. M. Nos. 24680, 24682, topotypes; L. M. Klauber Nos. 22650, 22685, 22715, María Madre Island; and seven specimens in British Museum (Natural History) from "Tres Mariás Islands," collected by Forrer.

Diagnosis.—As in *M. f. striolatus*, except ventrals 192 to 197 in males, 195 to 197 in females; lips not notably mottled in adults.

Description of holotype.—Brownish olive above, this color extending to the "keel" on each side of the belly; belly and tail otherwise immaculate, yellowish. All dorsal scales with a dark spot at the posterior apex, smaller on anterior scales, larger and elongate on median and posterior scales; caudal scales with two or three black dots at tip, one on each scale pit. Head slightly reddish; sides of head uniform brownish; lower labial border yellow, not stippled; median gular region suffused with light brown.

Scale rows 17-17-13; ventrals 195; tail incomplete; supralabials 8-8, 4th and 5th entering orbit; 9-9 infralabials; 2-2 preoculars, postoculars and temporals.

Variation.—The paratypes are much like the type. The only deviation in scutellation, except in ventral and caudal counts (given in the accompanying table) is in number of infralabials; two have 9-10, one has 10-?, and two 10-10.

Remarks.—As stated above, the chief difference between the present race and *striolatus* is in ventral count; there also appear to be a difference in the extent of mottling on the sides of the head; there is none in *variolosus* adults, while in *striolatus* the upper labials are prominently mottled (*cf.* Ortenburger, 1928, pl. 25).

TABLE 23.—*Variation in Masticophis flagellum variolosus*

Number	Sex	Ventrals	Caudals
Brit. Mus.-----	♂	192	125
Brit. Mus.-----	♂	197	128
U.S.N.M. No. 24681-----	♂	195	-----
Klauber No. 22650-----	♂	194	118+
Klauber No. 22715-----	♂	193	125
U.S.N.M. No. 24680-----	♀	196	106+
U.S.N.M. No. 24682-----	♀	195	-----
Klauber No. 22685-----	♀	197	111+
Brit. Mus.-----	♀	195	113
Brit. Mus.-----	♀	195	117
Brit. Mus.-----	♀	197	115
Brit. Mus.-----	♀	195	113
Brit. Mus.-----	♀	197	120

MASTICOPHIS MENTOVARIUS MENTOVARIUS (Duméril and Bibron)

Masticophis mentovarius SMITH, Journ. Washington Acad. Sci., vol. 31, pp. 388-389, 1941.

Eighteen specimens were collected: CHIAPAS: 3½ miles southwest of Colonia Soconusco (No. 111269); Tonalá (No. 111270). OAXACA: Tehuantepec (Nos. 111274-6; HMS Nos. 12082, 12293, 12450-3, 12476, 12761, 12775); Cerro de Huamelula (No. 111272); Mixtequilla (No. 111271); Cerro Arenal (No. 111273, HMS No. 18352).

The Museum has three others, from Juchitán (No. 30231) and Tehuantepec (Nos. 30422-3), Oaxaca.

Data taken on 11 of this series show a constant scale row count of 17-13, supralabials 7-7 (except in one which has 6-6), preoculars and

TABLE 24.—*Variation in Masticophis mentovarius mentovarius*

Number	Sex	Ventrals	Caudals	Infralabials
30422-----	♀	197	110+	10-10
111269-----	♀	205	107	10-10
111270-----	♀	198	-----	10-10
111272-----	♀	199	-----	11-11
30423-----	♂	195	118	10-10
111271-----	♂	197	104+	10-10
111273-----	♂	189	-----	10-10
111274-----	♂	194	110	10-10
111275-----	♂	192	105+	10-10
111276-----	♂	194	110+	10-10

postoculars 2-2; the temporals are 2-2 except on both sides of two and on one side of two others, which have 2-3. Other data are given in table 24.

*MASTICOPHIS TAENIATUS TAENIATUS (Hallowell)

A single Mexican specimen (No 46594) in the Museum is from Lake Santa María, Chihuahua.

MASTICOPHIS TAENIATUS AUSTRALIS Smith

Masticophis taeniatus australis SMITH, Journ. Washington Acad. Sci., vol. 31, pp. 390-392, 1941.

One specimen was secured, at Tacícuaro, Michoacán (No. 111312). The Museum has one other, the type (No. 10240), from Guanajuato.

The adults of this race still remain somewhat dubious. A series of specimens from Alvarez, San Luis Potosí, recently examined, is of considerable interest (Mus. Comp. Zool. Nos. 19027-31, 19552-3, 24999-25001). There are four juveniles that are identical with the type series of *australis*; there is one juvenile typical of *ruthveni* (lacking lateral stripe); and one juvenile is about intermediate between the two color patterns; all are of about the same size. There are three adults, all typical *ruthveni*. Thus one is faced with these possibilities: Either *ruthveni* normally has two types of patterns in the young—some very distinctly striped and some unicolor as in the adults—or the Alvarez population is an intergrading one between typical *ruthveni* of the coast and another plateau race, presumably *australis*. Unfortunately, there are no considerable series of specimens from areas in which *ruthveni* might be considered typical; practically all specimens are from southern Texas, where intergradation with *schotti* occurs, or from the plateau in San Luis Potosí, where intergradation with *australis* may be indicated. Thus it is not assured that two patterns do not normally occur in the young. Nevertheless, for the present such an assumption—an unusual one—is not necessary. A more reasonable assumption is that on the plateau the young are striped (such specimens=*australis*), while on the coast they are unicolor and like the adults (= *ruthveni*); the adults of both forms are unicolor and practically indistinguishable. Thus the specimen from Zamora, Michoacán, referred by me (*op. cit.*, p. 393) to *ruthveni* seems more properly associated with *australis*, a disposition in keeping with geographical facts and in support of the present theory. While specimens now known are insufficient to assure its accuracy, they do support the premise that two races of unicolored adults occur on the plains of the southern part of the plateau and on the coast from Texas to San Luis Potosí; one (*ruthveni*) has uni-

colored young, like the adults, and occurs only on the coastal plain; the other (*australis*) has very distinctly striped young, and occurs only on the plateau; in the eastern part of the plateau intergradation of the two forms occurs.

M. t. australis accordingly remains an important link in the evolutionary history of *taeniatus*, linking *ruthveni* with *schotti* and *girardi*. Retention of the juvenile stripes in the adults led to *girardi* and *schotti*, while loss of them completely, even in juveniles, led to *ruthveni*.

MASTICOPHIS TAENIATUS GIRARDI (Stejneger and Barbour)

Masticophis taeniatus girardi SMITH, Journ. Washington Acad. Sci., vol. 31, p. 393, 1941.

One specimen (No. 105300) was collected on La Cuchilla Mountain, 5 miles south of San Pedro, Coahuila. The Museum has one other Mexican specimen, from "Chihuahua" (No. 14272).

Respectively, these specimens have 15-11, 15-12 scale rows; 205 (♀), 208 (♀) ventrals; 123⁺, 259 caudals; 2-2 preoculars and postoculars; 1-2, 2-2 temporals.

MASTICOPHIS TAENIATUS RUTHVENI Ortenburger

Masticophis taeniatus ruthveni SMITH, Journ. Washington Acad. Sci., vol. 31, pp. 392-393, 1941.

One specimen was secured, 22 km. north of Victoria, Tamaulipas (No. 111279). The Museum has two⁵⁸ other Mexican specimens, from Soto La Marina (No. 37546) and 50 miles south of Brownsville, Tex. (No. 64681), Tamaulipas.

All are males, with 10-10 infralabials, 2-2 preoculars and postoculars, and 2-2 temporals (except on one side of one, with 2-3); respectively the scale rows are 15-12, 15-13, 15-13; ventrals 189, 197, 196; caudals 147⁺, 146⁺, ?; supralabials 8-8, 7-8, 8-8.

*MICRUROIDES EURYXANTHUS (Kennicott)

Four Mexican specimens are in the Museum, including the type (No. 1122)⁵⁹ from Sonora; another (No. 1131) bears the same data; No. 8566 is from Tiburón Island, Sonora; and No. 8850 is from Chihuahua.

⁵⁸ Ortenburger, 1923, p. 8.

⁵⁹ Kennicott, 1860, p. 337.

MICRURUS AFFINIS AFFINIS (Jan)

Three specimens were collected, one at Cuautlapan (No. 111325), one at Potrero Viejo (No. 111326), and another at Metlac (No. 111327), Veracruz. They are apparently typical, with complete black rings and very narrow, sometimes scarcely distinguishable yellow rings; the scales in the red areas are black-tipped. None of the subcaudals are entire. The anterior infralabials are black; the narrow yellow head ring passes through the middle of the parietals. The black rings cover two to three scale lengths. In all the supralabials and infralabials are 7-7, preoculars 1-1, postoculars 2-2, temporals 1-1-2; respectively the ventrals are 214, 197, 198; caudals 36 (♀), 47 (♂), 45 (♂); black rings on body and tail 12-6, 11-6, 11-5.

The Museum has four other specimens, from Orizaba, Veracruz (No. 30359); Carrizal, Veracruz (No. 46391); Tierra Caliente (No. 7089); and "Mexico" (No. 75343).

**MICRURUS AFFINIS ALIENUS* (Werner)

Three specimens in the Museum are from "Mexico" (No. 16398), and El Barrio, Oaxaca (Nos. 30521-2).

MICRURUS AFFINIS APIATUS (Jan)

Tentatively referred to this subspecies is No. 111324 from Aguacate, Chiapas. It is a female; scale rows 15-15-15; ventrals 214; caudals 37 (18 entire); supralabials and infralabials 7-7; preoculars 1-1; postoculars 2-2; temporals 1-2-2. Black bands 30 on body, 7 on tail. Total length 631 mm., tail 64 mm. Yellow bands very narrow, one-half or one-third of a scale wide, not visible on belly; black bands two or three scales wide on venter; most of the red scales on back with a black tip; red spaces on belly immaculate; head black to posterior edge of supraoculars; nuchal band including posterior tips of parietals and corner of mouth, incomplete ventrally.

The Museum has one other Mexican specimen, from Palenque, Chiapas (No. 46392).

**MICRURUS AFFINIS MAYENSIS* Schmidt

Five specimens in the Museum are from Yucatán (Nos. 6567, 24890-1, 24892), and Chichen Itzá, Yucatán (No. 46562).

**MICRURUS DIASTEMA DIASTEMA* (Duméril and Bibron)

A single specimen in the Museum (No. 67374) is from Magdalena, Jalisco.

*MICRURUS DIASTEMA DISTANS (Kennicott)

A single specimen (No. 1144) the type, is in the Museum, from Batosegachic, Chihuahua.⁶⁰

MICRURUS DIASTEMA MICHOCANENSIS (Dugès)

A single specimen (No. 111333) was found 4 km. north of Apatzingán, Michoacán. It was captured at night, crawling on the ground near the bank of a stream. It is a male with 15 scale rows, 208 ventrals, 50 caudals, 7-7 supralabials and infralabials, 1-1 preoculars, 2-2 postoculars, 1-1-2 temporals, 7-3 black rings on body and tail.

The Museum has no others.

*MICRURUS ELEGANS ELEGANS (Jan)

Four specimens in the Museum are from Mirador, Veracruz (Nos. 6367, 25041-3).

MICRURUS EPHIPPIFER (Cope)

Three specimens are from the state of Oaxaca: Tehuantepec (No. 111328); Cerro Arenal (No. 111329); and La Concepción (No. 111330). The specimen from Cerro Arenal was found at night with the aid of a lantern, as it crawled in the bottom of a dry arroyo. All have 15 scale rows, 7-7 supralabials and infralabials, 1-1 preoculars, 2-2 postoculars, and 1-1-2 temporals; the ventrals are 228, 213, 214, respectively; the caudals are 41 (♀), 51 (♂), 52 (♂), respectively, primary black rings on body and tail 23-5, 18-6, 19-6. The complete black rings are separated from each other by two yellow rings enclosing a red ring the dorsal part of which is all black; the black in the red areas reaches the second or third scale rows.

The Museum has two others—the type (No. 30085) from Tehuantepec and one (No. 46559) from Huilotepec, Oaxaca.

MICRURUS FITZINGERI FITZINGERI (Jan)

Micrurus fitzingeri fitzingeri BROWN and SMITH, Proc. Biol. Soc. Washington, vol. 55, pp. 63-65, 1942.

One specimen (No. 111334), found crushed in the road between Kilometers 62 and 63, 12 to 13 km. north of Cuernavaca, Morelos, well in the pine zone, has previously been described.

The Museum has two others, both from "Guanajuato" (Nos. 10231, 14432).

*MICRURUS FULVIUS TENERE (Baird and Girard)

A single Mexican specimen is in the Museum, from Alta Mira, Tamaulipas (No. 46523).

⁶⁰ Kennicott, 1860, p. 338.

*MICRURUS LATICOLLARIS (Peters)

A single specimen in the Museum is from a barranca near Cuernavaca, Morelos (No. 20167).

MICRURUS LATIFASCIATUS Schmidt

One specimen (No. 111323) was taken near La Esperanza, near Escuintla, Chiapas.

The Museum has no others from Mexico.

MICRURUS NIGROCINCTUS ZUNILENSIS Schmidt

Two specimens, one from La Esperanza (No. 111332), the other from Salto de Agua, Mount Ovando (No. 111331), both near Escuintla, Chiapas, are tentatively referred to this subspecies. They differ from described specimens in having the yellow bands distinct, complete about body, one and one-half scales wide; black bands on body and tail fewer, 12+3 or 4; and the prefrontals in contact with the labials (narrowly separated on one side in one).

The Museum has no others from Mexico.

*MICRURUS NUCHALIS Schmidt

Four specimens in the Museum are from "Tehuantepec," Oaxaca (Nos. 30261-3, 32348).

*NATRIX ERYTHROGASTER TRANSVERSA (Hallowell)

Three specimens in the Museum are from Santa Catarina, Nuevo León (No. 1314); San Diego, Nuevo León (No. 1319); and Mier, Tamaulipas (No. 46582).

NATRIX RHOMBIFERA RHOMBIFERA (Hallowell)

One specimen (No. 110511) was found in the Usumacinta River near the village pier at Emiliano Zapata (Montecristo), Tabasco. It represents the southernmost record of the genus in this continent and also presents an interesting problem with regard to its identity.

The specimen is rather typical, with the belly spotted distinctly; scale rows 27-25-20; ventrals 138; caudals 82; supralabials 8-8; infralabials 11-11; preoculars 2-2; postoculars 3-3; temporals 1-2-3. The presence of this form south as well as north of the range of *r. blanchardi* explains the specimen mentioned by Clay from La Antigua, Veraacruz, which he referred with question to *r. rhombifera*, in spite of the fact that it was separated by several hundred miles from other records of the race, skipping over the entire range of *r. blanchardi*. While this distribution is not exactly orthodox, I can find no char-

acters whatever that might serve to distinguish the southern population.

The Museum has no others from Mexico.

NATRIX RHOMBIFERA BLANCHARDI Clay

One specimen referred to this form is from Huichihuayán, 42 km. north of Tamazunchale, San Luis Potosí (No. 110512). It is typical, with the belly practically unmarked; it has 25-25-20 scale rows; ventrals 141; tail broken; supralabials 8-8; infralabials 11-12; preoculars 1-1; postoculars 3-3; one anterior temporal; 22 maxillary teeth; female.

The Museum has one other specimen (No. 46533, a paratype⁶¹), from Tlacotalpam, Veracruz.

**NATRIX VALIDA* (Kennicott)

The type (No. 1309),⁶² from Durango, and one specimen (No. 31384) from Colima, are in the Museum.

NINIA DIADEMATA DIADEMATA Baird and Girard

Sixteen specimens are from the following localities: Tequeyutepec, Veracruz (Nos. 109808-10); Cuautlapan, Veracruz (Nos. 109811-22); and Piedras Negras, Guatemala (No. 109807).

Supralabials 5-5 in one, 5-6 in one, 6-6 in 14; infralabials 6-6 in 13, 6-7 in two, 7-7 in one; a small preocular split off corner of prefrontal in one; in another a small preocular wedged between labial, loreal and orbit; prefrontal separated from orbit (by contact of supraocular and loreal) on one side in one, on both sides in another; postoculars 1-1 in two, 1-2 in one, 2-2 in 13. Variation in ventral and caudal counts is given in table 25.

TABLE 25.—*Variation in Ninia diademata*

U.S.N.M. No.	Sex	Ventrals	Caudals	U.S.N.M. No.	Sex	Ventrals	Caudals
109811	♀	149	86	109810	♀	151	87
109807	♀	136	96	109820	♀	153	83
109813	♀	149	79	109821	♀	146	83
109815	♀	146	87	109812	♂	142	90
109818	♀	149	82	109814	♂	143	92
109819	♀	153	94	109815	♂	143	97
109808	♀	159	88	109817	♂	136	86
109809	♀	154	85	109822	♂	145	93

⁶¹ Clay, 1938, p. 252.

⁶² Kennicott, 1860, p. 334.

The Tequeyutepec specimens were found under stones after a short period of rains during the dry season; the Piedras Negras specimen was found at night along a trail through the forest.

The Museum has 11 other specimens, as follows: OAXACA: Tehuantepec (No. 30342); Totontepec (Nos. 20834, 46436). VERACRUZ: Jalapa (Nos. 4536-7); Mirador (Nos. 25017-8); Orizaba (No. 12122); hills west of Veracruz (No. 5316). No LOCALITY: "Mexico" (Nos. 14602, 30108).

NINIA SEBAE SEBAE (Duméril and Bibron)

Fifty-four specimens were secured, as follows: VERACRUZ: Cautlanpan (Nos. 109823-58); Tezonapa (Nos. 109870-1); Potrero Viejo (Nos. 109859-69). CHIAPAS: Palenque (Nos. 109872-5, HMS No. 8847.) In Veracruz specimens were usually found in piles of debris in banana patches. The Chiapas specimens were found in the debris

TABLE 26.—Variation in *Ninia sebae sebae*

U.S.N.M. No.	Sex	Ventrals	Caudals	U.S.N.M. No.	Sex	Ventrals	Caudals
109863	♀	144	51	109861	♂	135	55
109864	♀	144	50	109862	♂	136	54
109865	♀	142	49	109867	♂	136	-----
109866	♀	141	45	109870	♂	137	57
109868	♀	141	53	109871	♂	132	57
8847	♀	-----	48	109823	♂	139	53
109873	♀	149	45	109872	♂	142	57
109824	♀	140	48	109874	♂	140	54
109826	♀	146	46	109875	♂	138	58
109827	♀	140	46	109825	♂	138	59
109828	♀	138	47	109829	♂	140	57
109830	♀	143	48	109831	♂	135	55
109834	♀	147	48	109832	♂	137	54
109837	♀	146	48	109833	♂	137	53
109839	♀	140	48	109835	♂	140	53
109840	♀	142	50	109836	♂	141	55
109844	♀	145	53	109838	♂	139	54
109846	♀	140	50	109841	♂	145	55
109850	♀	142	47	109842	♂	140	57
109851	♀	138	47	109843	♂	137	51
109869	♀	146	45	109845	♂	145	51
109853	♀	139	40	109847	♂	142	-----
109856	♀	139	48	109848	♂	137	55
109857	♀	143	50	109849	♂	140	57
109858	♀	143	50	109852	♂	136	62
109859	♂	138	55	109854	♂	134	52
109860	♂	136	54	109855	♂	139	57

accumulated in the axils of dead palm trees. They would occasionally flatten the head and fore part of the body when discovered.

Variation in cephalic scutellation of this series is extensive. Supralabials 6-7 in one (sixth and seventh fused), 7-8 in four, 7-7 in 48; infralabials 5-6 in one, 5-7 in one, 6-7 in four, 7-8 in two, 7-7 in forty-five; postoculars 3-3 in two, 2-3 in two, one or both fused with supraocular in four, 1-1 in two, 1-2 in two, 2-2 in forty-one; a pre-subocular (sometimes double, always minute) on one or both sides in sixteen; a small preocular split off corner of prefrontal in two. Twenty specimens are uniform red above, with no evidence of black cross bars (except that following light nuchal collar); in four others there are one or two small black spots on the body; other specimens represent intermediate conditions between this and the strongly barred phase represented by the majority of the remaining specimens.

The Museum has 11 other specimens, from "Mexico" (No. 56432), Córdoba, Veracruz (No. 30239), Mirador, Veracruz (Nos. 25019-23), and Orizaba, Veracruz (Nos. 63352-3, 12120, 12124).

**NINIA SEBAE MORLEYI* Schmidt and Andrews

Five specimens are in the Museum, from "Yucatán" (Nos. 24893-6), and Chichen Itzá, Yucatán (No. 46569).

**OPHEODRYS AESTIVUS* (Linnaeus)

The Museum has a single Mexican specimen, No. 2445, from Matamoros, Tamaulipas.

**OPHEODRYS MAYAE* (Gäige)

A single specimen in the Museum is from La Vega, Yucatán (No. 46531).

**OPHEODRYS VERNALIS BLANCHARDI* Grobman

Two specimens (No. 434) are labeled "Mexico." That the form actually occurs in the country is in doubt.⁶³

OXYBELIS ACUMINATUS (Wied)

Forty-four specimens were secured, as follows: CHIAPAS: La Esperanza, near Escuintla (Nos. 110579-84). OAXACA: Tehuantepec (Nos. 110576-8; HMS Nos. 11983, 12378, 12716-8, 12762-4, 16171-4, 18369, 18552); Tres Cruces (Nos. 110574-5; HMS Nos. 12349, 12390, 12438, 12557); Portillo Los Nanches, near El Limón, 7 leagues northwest of Tehuantepec (Nos. 110566-7); Tenango (No. 110568; Mount Guen-

⁶³ Grobman, 1941, p. 14.

gola (Nos. 110572-3; HMS Nos. 18038-40, 18042, 18044); Escurana (No. 110569); La Concepción (Nos. 110570-1); Río Grande, 12 miles north of Nliltepec (No. 110565). TAMAULIPAS: Hda. La Clementina, 4 miles west of Forlón (No. 105306).

The Museum has 15 other Mexican specimens, from the states of COLIMA (Manzanillo, No. 46606); GUERRERO (Acapulco, No. 46461); NAYARIT (María Madre Island, No. 24673; Tepic, No. 46455); OAXACA (Choapam, No. 46501; Tehuantepec, Nos. 30482-3, 32347); SONORA (Guaymas, No. 5318); TABASCO (No. 6627 [2]); VERACRUZ (Santa Lucrecia, No. 67375; Tuxpan, No. 25205); YUCATÁN (Chichen Itzá, No. 46565); and from "Mexico" (No. 16394).

OXYBELIS FULGIDUS (Daudin)

Six specimens were secured, all from the state of Oaxaca: Tehuantepec (Nos. 110562-3); Tres Cruces (Nos. 110560-1, HMS No. 12047); Palmar (No. 110564). Scale rows 17-13; ventrals 202, 202, 204, 203, 204, 214, respectively; caudals 156 (♂), 160 (♂), 167 (♂), 159 (♂), 163 (♂), 154 (♀); supralabials 10-10, except on one side of one (11); infralabials 10-10; preoculars 1-1; postoculars 2-2, except in one (1-1); temporals 1-2.

One of these contains a bird in its stomach.

The Museum has three other Mexican specimens, from Huilotepec, Oaxaca (No. 46603); Tapanatepec, Oaxaca (No. 30417); and Chichen Itzá, Yucatán (No. 46573).

PELAMIS PLATURUS (Linnaeus)

One specimen (No. 110414) is from Salina Cruz, Oaxaca. Nine supralabials, none touching prefrontal or entering orbit; 10 infralabials; scales in 57 rows.

The Museum has 12 other specimens: COLIMA: Manzanillo Bay (Nos. 51464-7). GUERRERO: Acapulco (No. 46415). JALISCO: Banderas Bay (Nos. 51468-70, 55911). NAYARIT: Santa Margarita Island, Tres Mariás Island (No. 51078). SINALOA: Mazatlán (No. 51463); "Sinaloa" (No. 65833).

PITUOPHIS CATENIFER AFFINIS Hallowell

Eleven specimens were secured: COAHUILA: 21 miles north of Saltillo (Nos. 105301-2). CHIHUAHUA: 39 miles east of Carmen (No. 105291); 9 miles west of Carrizal (No. 104678); Río Santa María, near Progreso (Nos. 104681-6, 110894).

The Museum has seven⁶⁴ other Mexican specimens, six from the state of Chihuahua (Chihuahua, Nos. 14222, 14293; Casas Grandes, No. 46372; Batopilas, No. 46381), and one from "Sonora" (No. 1518).

⁶⁴ Stull, 1940, pp. 134-135.

TABLE 27.—*Variation in Pituophis catenifer affinis*

Number	Sex	Scale rows	Ventrals	Caudals	Supra- labials	Infrac- labials	Preoc- ulars	Postoc- ulars	Body and tail spots
104678	♂	29-33-23	223	61	8-8	12-12	1-1	3-3	44-11
104681	♂	27-31-22	227	59	8-8	-----	1-1	3-3	49-11
104683	♂	27-31-23	220	56	8-8	11-13	1-1	3-3	39-10
104685	♂	27-31-23	229	57	8-8	12-12	1-1	3-3	49-13
104686	♂	27-31-23	229	-----	8-8	11-?	1-1	3-4	38-?
105291	♂	27-31-23	222	62	-----	12-?	1-1	3-3	52-12
104682	♀	27-31-23	229	56	8-8	12-13	1-1	3-4	44-12
104684	♀	29-33-23	237	59	8-8	12-13	1-1	4-5	51-13
105301	♀	27-31-22	226	51	8-9	12-13	2-2	4-4	38-11
105302	♀	27-31-21	228	53	8-8	13-13	1-1	2-3	38-9
110894	♀	29-31-23	231	55	8-8	13-13	1-1	3-4	38-9

All the above specimens have four prefrontals; the fourth supralabial only enters the eye in all except two, in which the fifth also enters the orbit; in four specimens there is an azygous scale.

*PITUOPHIS CATENIFER SAYI (Schlegel)

Eight Mexican⁶⁵ specimens in the Museum are from San Antonio, Chihuahua (No. 1519)⁶⁶; Castanuelos, Coahuila (No. 1539 [2]); Presidio del Norte, Chihuahua (No. 1542); and "Mexico" (Nos. 1415, 29347-9).

PITUOPHIS DEPPEI DEPPEI (Duméril)

Three male specimens come from Tacicuaro, Michoacán (No. 110888); Chalco, Mexico (No. 110889); and 30 km. north of Puebla (No. 110887). Scale counts of these, in order listed, are: scale rows 27-29-21, 27-29-21, 25-28-21; ventrals 224, 216, 218; caudals 61, ?, 59; supralabials 8-?, ?-?, 8-?; infralabials 12-?, ?-?, 12-13; spots on body and tail 38-13, 30-?, 35-13. The two from Michoacán and Puebla have the posterior spots black (also the anterior), as is typical of *deppei*, but the Michoacán specimen (a juvenile measuring 437 mm. in total length) has all the spots brown, dark-edged. This condition may be typical of the young, as three other young specimens (Ada Magdalena, Durango, and "Chihuahua") have spots of similar nature.

The Museum has 12 other specimens⁶⁷ from DISTRITO FEDERAL: Mexico City (No. 12731 [2]). DURANGO: Ada Magdalena (No. 46365). GUANAJUATO (Nos. 11355, 16442). JALISCO: Atemajac (No. 46385); Guadalajara No. 24969). MICHOACÁN: Acámbaro (No. 46557).

⁶⁵ Stull, 1940, p. 114-116.

⁶⁶ Type of *Churchillia bellona* Baird and Girard, 1852, p. 350.

⁶⁷ Stull, 1940, p. 40.

PUEBLA: Atlixco (No. 46433). SAN LUIS POTOSÍ: Jesús María (No. 46554). Two final specimens (No. 8321 [2]) bear the data "between Chihuahua and Mexico."

PITUOPHIS DEPPEI JANI (Cope)

Pituophis deppei jani SMITH, Publ. Field Mus. Nat. Hist., zool. ser. (in press).

Two very large males (No. 110890-1) were found a few kilometers north of Ixmiquilpan, Hidalgo.

The Museum has one other specimen, the type (No. 1522), from Buenavista, Coahuila.⁶⁸

PITUOPHIS DEPPEI LINEATICOLLIS (Cope)

Two specimens were secured. One (No. 110892) is from near Acultzingo, Veracruz. It is a specimen that had been dragged on the asphalt pavement by a rope held by men on a truck direct toward Orizaba, from Tehuacán. The snake had been dragged by the tail, and apparently from no great distance, since only the belly scales have been scored, and these only relatively little. In all probability the snake was killed in the vicinity of Pájaro Verde (near the crest of the pass) and dragged only from there halfway down the slope to Acultzingo, before it was cast aside on bushes by the road. It certainly could have been dragged from no greater distance than Tehuacán (some 35 km.), else the scales would have been completely mutilated and impossible to count.

In this specimen the scale rows are 27-29-21; ventrals 231; caudals 67; supralabials 9-?; infralabials 12-?; loreal 1-1; labials entering eye, fifth and sixth; no azygous scale; spots on body about 33, on tail 12; male.

The second specimen (No. 110893) is a female from San Pedro Quiechapa, Oaxaca. Scale rows 27-27-21; ventrals 245; caudals 62; supralabials 8-8, fourth and fifth entering orbit; infralabials 11-12; preoculars 1-1; postoculars 2-3; loreals 1-1; spots on body 29, on tail 9.

The Oaxaca specimen is perfectly typical, its characters falling well within the limits of variation shown by Stull (1940, pp. 47-52, fig. 26). The Veracruz specimen, however, is not typical, and approaches the characters of *deppei deppei*. The chief differences between the two species are:

⁶⁸ Cope, 1860, p. 369; Stull, 1940, p. 41.

lineaticollis

1. Ventrals 236 to 249
2. Dorsal scales between the blotches unmarked
3. Neck stripes
4. Blotches conspicuously light-centered, anteriorly as well as posteriorly, dark borders well defined and broad

deppci deppci

1. Ventrals 211 to 235
2. Dorsal scales between the blotches (and many of those involved by blotches) with a dark, median, longitudinal streak
3. No neck stripes
4. Blotches solid black anteriorly and posteriorly, light-centered medially, dark borders incomplete when present (medially)

The Acultzingo specimen has 231 ventrals, as in *d. deppci*, and the dorsal scales have longitudinal dark streaks, giving much the general appearance of *d. deppci*. In these two characters it is unquestionably referable to the latter race. In the more important characters of the neck stripes and light-centered dark-edged blotches, however, it is unquestionably referable to *lineaticollis*. In view of the fact that the specimen probably comes from an area between the known peripheral range of *lineaticollis*, and the known central plateau range of *d. deppci*, intergradation between these two is very strongly indicated. It is possible that a race distinct from either *lineaticollis* or *deppci deppci* is represented, but if so, it still would occupy a position linking *deppci deppci* and *lineaticollis*. The latter possibility is not very great, since typical *deppci* is known from the Tehuacán desert basin (Cacaloapam, Puebla; see Taylor, 1940, p. 463) as well as from Jalapa, Veracruz (type locality).

The Museum has four other specimens,⁶⁹ from Guerrero (Acahuitzotla, No. 46537; Omilteme, No. 46462) and unknown localities (Nos. 30506, 32220).

*PLIOCERCUS BICOLOR Smith

A single specimen, the type, is in the Museum, from Tuxpan, Veracruz (No. 25203).⁷⁰

PLIOCERCUS ELAPOIDES ELAPOIDES Cope

Pliocercus elapoides elapoides SMITH, Proc. Biol. Soc. Washington, vol. 54, pp. 119-120, 1941.

Four specimens were collected, at Potrero Viejo, Veracruz (No. 110063), and Cuautlapan, Veracruz (Nos. 110764-6). The Museum has six others, from Orizaba (Nos. 4383, 6323, 12125) and Mirador (Nos. 6368, 25029-30), Veracruz; and in addition an intergrade between this and *diastemus*, from an unknown locality, possibly Santa Efigenia, Oaxaca (No. 62088).

⁶⁹ Stull, 1940, p. 51.

⁷⁰ Smith, 1941p, pp. 123-124.

PLIOCERCUS ELAPOIDES DIASTEMUS (Bocourt)

Pliocercus elapoides diastemus SMITH, Proc. Biol. Soc. Washington, vol. 54, pp. 120-121, 1941.

Seven specimens, from various localities near Escuintla, Chiapas, were secured: Cerro Ovando, 6,500 feet (No. 110768); La Esperanza (Nos. 110772-3, HMS No. 17148); Cruz de Piedra (Nos. 110770-1); and Rancho Las Gradadas (No. 110769). Those I observed in the field were crawling about during the day.

The Museum has two others, from Chicharras, Chiapas (Nos. 46437-8).

PLIOCERCUS ELAPOIDES LATICOLLARIS Smith

Pliocercus elapoides laticollaris SMITH, Proc. Biol. Soc. Washington, vol. 54, pp. 122-123, 1941; vol. 55, pp. 159-160, 162, 164, 1942.

One specimen, the type (No. 110767), is from Tenosique, Tabasco. The Museum has no other specimens.

*PSEUDOFICIMIA FRONTALIS (Cope)

Three specimens are in the Museum, one from Guadalajara, Jalisco (No. 24961), and two (cotypes) from "Colima" (Nos. 31424-5).⁷¹

*PSEUDOLEPTODEIRA LATIFASCIATA (Günther)

A single specimen (No. 46550) is in the Museum, from Piaxtla, Puebla.

PSEUSTES POECILONOTUS ARGUS (Bocourt)

Five specimens were collected, one (No. 110516) from near Palenque, Chiapas, the others (Nos. 110517-20) from Piedras Negras, Guatemala.

Two of these are young, No. 110519 measuring 822 mm. in total length (tail 224 mm.), the other dried and broken; both have the pattern of *lunulatus* and in this feature do not resemble adult *argus* in the least. This type of pattern, however, seems to be typical of young *poecilonotus*, as it occurs in *p. poecilonotus* as well as in *p. argus*, and is closely matched in the young of *p. shropshirei*. A sub-adult of *p. argus* from Santo Domingo, Oaxaca (No. 46502) gives evidence of the transition from the juvenile *lunulatus* type of pattern to the adult *argus* pattern.

The Museum has three other Mexican specimens, from Mirador, Veracruz (No. 6373, locality open to question, as the catalog is blank; this data given by a label in jar); mountains near Santo Domingo, Oaxaca (No. 46502); "Tierra Caliente" (No. 7096). The last specimen

⁷¹ Taylor and Smith, 1942a, pp. 243-246.

is identified as *p. poecilonotus* by Amaral (1929, p. 312), but this form occurs in Mexico only in the Yucatán Peninsula, from which the specimen probably did not originate. It is a juvenile, with the *lunulatus* pattern; present specimens show that this pattern is not confined to *p. poecilonotus* as previously thought. In fact, the young of *p. argus* and *p. poecilonotus* are practically inseparable.

TABLE 23.—Variation in *Pseustes poecilonotus argus*

U.S.N.M. No.	Sex	Scale rows	Ventrals	Caudals	Infralabials	Max. teeth
110516----	♂	21-23-15	207	135	12-12	20
110517----	♂	23-23-15	208	134	13-13	21
110518----	♂	21-23-15	208	129	13-13	-----
110519----	♂	21-23-15	209	135	13-14	22
110520----	♀	22-24-15	215	128	14-?	19

RHADINAEA AEMULA Bailey

One specimen (No. 110373) is from Kilometer 58, near Tres Cumbres, Morelos, collected by E. H. Taylor and H. M. Smith. It is a female, with 169 ventrals, 106 caudals, 8-8 supralabials, 10-10 infralabials, a presubocular present.

The Museum has no others.

RHADINAEA CRASSA Smith

PLATE 32, FIGURE 1.

Rhadinaea crassa SMITH, Proc. Biol. Soc. Washington, vol. 55, pp. 190-191, pl. 3, figs. 4, 5, 1942.

One specimen, a paratype (No. 110366), is from Barranca de los Horcones, 10 km. south of Durango, Hidalgo. It is a badly crushed specimen found in the road.

The Museum has no others.

RHADINAEA DECORATA (Günther)

PLATE 32, FIGURE 3.

Sixteen specimens are from the following localities in Veracruz: Peñuela (Nos. 110362-3). Cuautlapan (Nos. 110354-61); Potrero Viejo (Nos. 110348-53). One of the specimens from Peñuela contained a *Bolitoglossa rufescens* in its stomach.

The infralabials are 9-9 in one; one preocular on both sides in one, on one side in another; three preoculars on one side in one. Variation in caudal and ventral counts is given on the accompanying table.

TABLE 29.—*Variation in Rhadinaea decorata*

U.S.N.M. No.	Sex	Ventrals	Caudals	U.S.N.M. No.	Sex	Ventrals	Caudals
110350	♀	124	111	110359	♀	124	107
110356	♀	127	109	110353	♀	129	112
110363	♀	128	104	110355	♀	128	-----
110357	♀	123	-----	110351	♂	123	119
110358	♀	125	102	110354	♂	124	121
110349	♀	126	100	110348	♂	119	-----
110361	♀	129	-----	110352	♂	121	-----
110360	♀	134	112	110362	♂	121	122

The Museum has six other specimens from Mexico—two from "Mexico" (Nos. 12096, 30409), three from near Santo Domingo, Oaxaca (Nos. 46361-3), and one from Ocuilapa, Chiapas (No. 46527).

RHADINAEA FORBESI Smith

Rhadinaea forbesi SMITH, Proc. Biol. Soc. Washington, vol. 55, pp. 188-189, pl. 3, fig. 3, 1942.

The type series of three specimens, from Tequeyutepec, Veracruz (Nos. 110364-5, HMS No. 13211), are in the collection. They were found under stones in a grassy area in the mountains, after a spell of rain in the dry season.

The Museum has one other (No. 29124) from an unknown locality.

RHADINAEA FULVIVITTIS Cope

PLATE 32, FIGURE 2

A single specimen (No. 110347) is from Cerro San Felipe, Oaxaca, collected by E. H. Taylor. It is a male, with 159 ventrals, 98 caudals, 8-8 supralabials, 10-10 infralabials, and presubocular present.

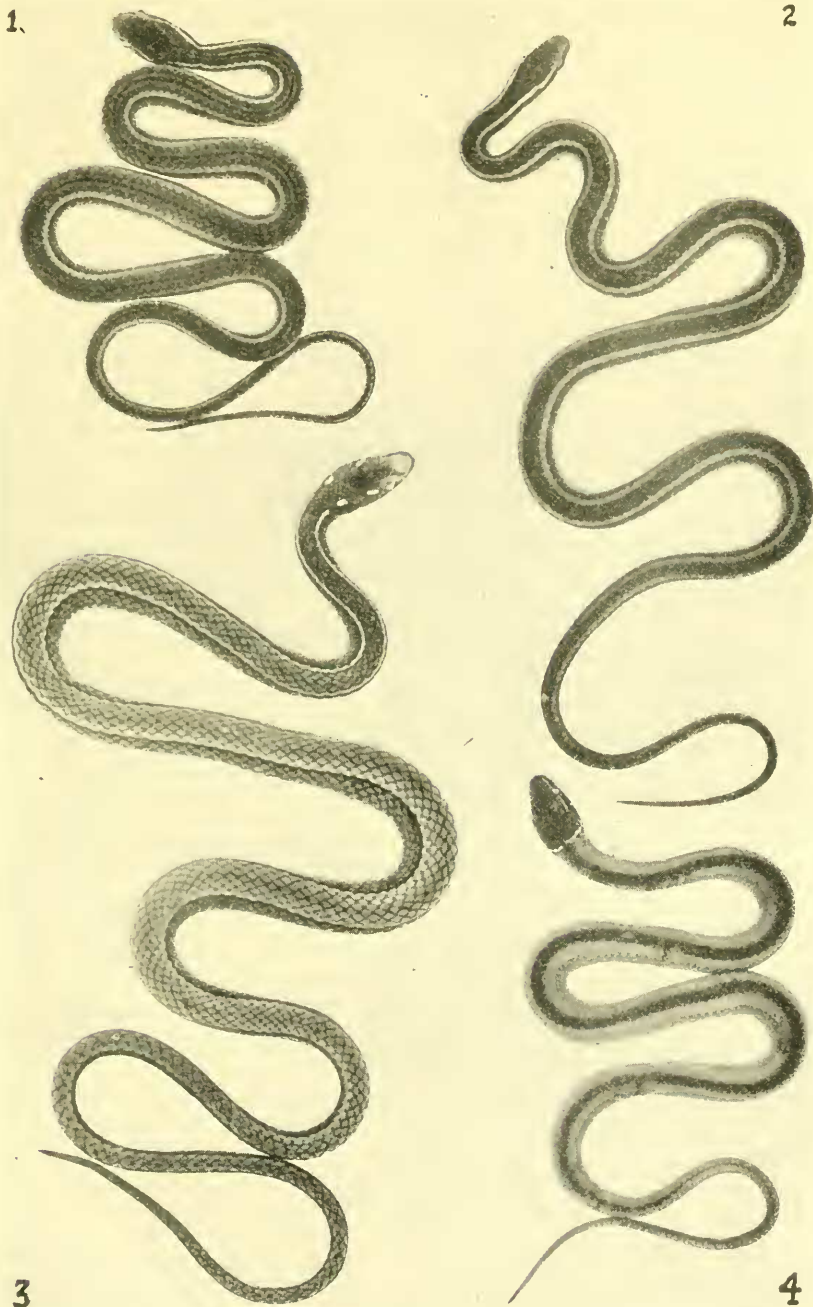
The Museum has three⁷² other specimens, two from Orizaba (Nos. 7075, the type, and no. 6333), and one (No. 46434) from Mount Zempoaltepec, Oaxaca.

*RHADINAEA HESPERIA HESPERIOIDES Smith

Three specimens⁷³ are in the Museum, from "Guanajuato" (No. 15430), Magdalena, Jalisco (No. 67373), and Plomosos, Sinaloa (No. 46456). As noted elsewhere (Smith, *loc. cit.*) the locality for the first specimen is probably erroneous.

⁷² Bailey, 1940, p. 11.

⁷³ Smith, 1942h, pp. 186-187, pl. 3, fig. 1.



1, *Rhadinaea crassa*, EHT-HMS No. 5526, from Durango, Hidalgo.

2, *Rhadinaea fulvivittis*, EHT-HMS No. 5524, from Cerro de San Felipe, Oaxaca. Oaxaca.

3, *Rhadinaea decorata*, EHT-HMS No. 5530, from Potrero Viejo, Veracruz.

4, *Rhadinaea laureata*, EHT-HMS No. 5527, from Lake Pátzcuaro, Michoacán.

*RHADINAEA HESPERIA HESPERIA Bailey

Two specimens are in the Museum, from "Guanajuato" (No. 15429) and Cuernavaca, Morelos (No. 20166).

RHADINAEA LACHRYMANS (Cope)

Four specimens (Nos. 110367-9, HMS No. 14789), all females, were secured on Mount Ovando, Chiapas, at elevations between 5,200 and 6,500 feet. All were found under or in rotten logs. There is but one preocular in all; ventrals and caudals, respectively, in the order listed: 175 and 71; 172 and 78; 170 and 72; 168 and 76.

The Museum has no others of the species.

RHADINAEA LAUREATA (Günther)

PLATE 32, FIGURE 4

Three specimens (Nos. 110370-2) are from a locality 5 miles south of Carapa, Michoacán. All were found under logs. One specimen contained a *Sceloporus scalaris*. The scutellation of the head is normal; ventrals and caudals, respectively, in the order listed, ♂ 159 and 90; ♂ 157 and 92; ♀ 164 and 79.

The Museum has no others of the species.

RHADINAEA OMILTEMANA (Günther)

One specimen, a topotype, collected by E. H. Taylor (No. 110374), is from Omilteme, Guerrero. It is a male, with 151 ventrals, 87 caudals, 8-8 supralabials, 10-10 infralabials, 2 pre- and 2 post-oculars, temporals 1-2-3. Color as described and figured by Bailey (1940, pp. 13-14, pl. 2, fig. 2).

The Museum has no others of the species.

*RHADINAEA QUINQUELINEATA Cope

A single specimen, the type, is in the Museum, from Tezuitlán, Puebla (No. 31350).⁷⁴

RHADINELLA SCHISTOSA Smith

Rhadinella schistosa SMITH, Copeia, 1941, pp. 7-10, fig. 1.

A single specimen, a paratype (No. 109914), is from Cuautlapan, Veracruz.

This genus shows a relationship with *Trimetopon* as well as with *Rhadinaea* and *Diadophis*. From the former it differs in having more numerous maxillary teeth, and thus a longer maxillary bone. The

⁷⁴ Cope, 1886, p. 277; Smith, Publ. Field Mus. Nat. Hist., zool. ser. (in press).

teeth in *Rhadinella* number 16 and 17, while in two *Trimetopon* examined they are 11 to 13. *Rhadinæa* has 16 to 22 teeth in Mexico; thus *Rhadinella* would appear closer to that genus in this character. Another difference is the character of the hemipenial spines, which are perfectly straight in *Rhadinella*, hooked in both *Trimetopon* and *Rhadinæa*. Finally, the tail is extremely short in *Rhadinella*, with 42 or fewer caudals, while in *Trimetopon* and *Rhadinæa* the subcaudals are 58 or more.

The Museum has no others of the species.

*RHINOCHEILUS ANTONII ANTONII Dugès

A single specimen in the Museum is from Culiacán, Sinaloa (No. 46370).

SALVADORA BAIRDII Jan

Ten specimens were secured, from the following localities: GUANAJUATO: Acámbaro (No. 109244). MICHOACÁN: Tacúcuaro (Nos. 109236-42). PUEBLA: 20 km. south of Puebla (No. 109235). VERACRUZ: El Limón (No. 109243).

On two occasions specimens were startled in brush, whereupon they raced away with considerable noise, stopping abruptly a few yards away. In both cases the snakes stopped within gunshot, and in spots where they could be seen without change in my own position.

In eight specimens examined, the maxillary teeth are 9-3, with the exception of No. 109240, in which they are 10-3. The posterior chin shields are closely approximated, usually in partial contact. In one specimen the preocular is single, and in another there are three post-

TABLE 30.—Variation in *Salvadora bairdii*

U.S.N.M. No.	Sex	Ventrals	Caudals	Supra- labials	Infra- labials	Row reduction	
						17-15	15-13
109242	♀	200	99	8-8	11-11	120-117	142-138
109238	♀	201	-----	8-8	10-10	125-123	127-126
109235	♀	188	87	8-8	10-10	111-112	121-123
109244	♀	200	103	8-8	10-10	116-?	144-140
109236	♂	193	103	8-8	10-?	115-?	?-?
109240	♂	194	-----	8-8	10-10	124-124	135-138
109241	♂	195	87	8-8	10-10	121-120	143-143
109237	♂	197	-----	8-8	10-?	127-127	145-141
109239	♂	195	101	8-8	9-9	109-108	124-125
109243	♂	198	101	8-8	9-9	110-108	156-155

oculars; in all others the preoculars and postoculars are 2-2. Loreal single in all; antepenultimate labial in contact with postoculars in all; and anterior section of nasal separated from second supralabial in all. Supraanal keels are present in adult males.

The National Museum has five other specimens, from Orizaba, Veracruz (No. 30495); San Cristóbal, Jalisco (No. 46419); Guanajuato (No. 9883); "between Mexico City and Chihuahua" (No. 8325); and "Jalisco" (No. 56576).

**SALVADORA BOGERTI* Smith

A single specimen, the type, is in the Museum, from Tehuantepec, Oaxaca (No. 30296).⁷⁵

**SALVADORA GRAHAMIAE* Baird and Girard

Two specimens from Mexico are in the Museum, from Presidio del Norte, Chihuahua (No. 2080), and from "Sonora" (the type, No. 2081).⁷⁶

**SALVADORA HEXALEPIS HEXALEPIS* (Cope)

Two specimens from Mexico are in the Museum, from "Sonora" (No. 2082) and Sierra Blanca, Sonora (No. 43187).

**SALVADORA HEXALEPIS CELERIS* Smith

A single specimen, the type (No. 40043), is in the Museum, from San Blas, Sinaloa.⁷⁷

SALVADORA HEXALEPIS DESERTICOLA Schmidt

Six specimens were collected, all near the Río Santa María, near Progreso, Chihuahua (Nos. 104668-73).

Preoculars 1-2 in one, and 2-2 in the remainder; postoculars 2-2 in all; loreal single in all; anterior section of nasal contacts second labial in all; antepenultimate supralabial contacts postoculars in all.

The Museum has eight others from Mexico, all from the state of Chihuahua: "Chihuahua" (Nos. 14255, 14295); Lake Santa María (No. 46593); Batopilas (No. 46505); Balleza (No. 46504); Casas Grandes (Nos. 46375-6); and Chihuahua City (No. 46451).

⁷⁵ Smith, 1941b, pp. 2-6, figs. 1-2.

⁷⁶ Baird and Girard, 1853, p. 104; Schmidt, 1940, pp. 144-145.

⁷⁷ Smith, 1941b, pp. 9-11.

TABLE 31.—*Variation in Salvadora hexalepis deserticola*

U.S.N.M. No.	Sex	Ventrals	Caudals	Supralabials	Infra- labials	Row reduction	
						17-15	15-13
104671	♀	188	68	9-9	11-11	129-129	156-153
104670	♀	191	73	9-9	10-11	143-147	162-166
104673	♀	190	72	9-9	10-10	125-127	149-149
104672	♀						
104669	♂	186	76	9-9	10-11	122-123	146-141
104668	♂	189	79	9-9	10-11	131-133	162-162

The specimen from Galeana has 10-3 maxillary teeth; the anterior section of the nasal is in contact with the second supralabial in both; the antepenultimate supralabial is in contact with the postoculars except on one side of one.

The Museum has no others of the species from Mexico.

SALVADORA INTERMEDIA INTERMEDIA Hartweg

Salvadora intermedia HARTWEG, Copeia, 1940, pp. 256-259.

One specimen (No. 109228) is from Chilpancingo, Guerrero, collected by W. W. Brown. This is a paratype (originally Univ. Mich. Mus. Zool. No. 85726) and is discussed in the original description.

The specimen is a unique in the Museum collections.

SALVADORA LEMNISCATA (Cope)

Twenty specimens were collected, at the following localities: OAXACA: Mixtequilla, 3 miles northwest of Tehuantepec (Nos. 109253-5); Tehuantepec (city) (Nos. 109259-64); Tres Cruces, about 40 km. northwest of Tehuantepec (Nos. 109256-8); Yerba Santa, foot of Mount Guengola, 15 miles northwest of Tehuantepec (Nos. 109247-8); Cerro Arenal, 30 km. northwest of Tehuantepec (No. 109251); Escurana, 15 km. northwest of Tehuantepec (No. 109250); El Limón, 35 km. northwest of Tehuantepec (No. 109252); near Lachiguirí (No. 109249). CHIAPAS: Tonalá (Nos. 109245-6).

The preoculars are invariably single, the postoculars invariably double. The frontal is in contact with the preocular on both sides in eight, on one side in three. Other variation in scutellation is given in the accompanying table.

The Museum has no other specimens.

TABLE 32.—Variation in *Salvadora lemnicata*

U.S.N.M. No.	Sex	Ventrals	Caudals	Supralabials	Infralabials	Labials enter eye
109255	♂	197	-----	9-9	12-12	4-5, 4-5-6
109253	♂	207	139+	9-9	11-12	4-5-6
109264	♂	201	142+	9-9	11-12	4-5-6
109262	♂	202	-----	9-9	12-13	4-5-6
109258	♂	205	-----	9-9	12-12	4-5-6
109250	♂	197	136+	9-9	12-13	4-5-6
109252	♂	202	131+	9-9	13-13	4-5-6
109245	♂	203	-----	9-9	12-12	4-5
109254	♀	203	136	8-9	11-12	4-5, 4-5-6
109263	♀	198	137	9-9	12-12	4-5-6
109259	♀	201	-----	8-9	11-11	4-5, 4-5-6
109261	♀	200	133	9-9	11-12	4-5-6
109260	♀	198	134	9-9	11-11	4-5-6
109256	♀	202	139+	9-9	11-12	4-5-6
109257	♀	199	-----	9-9	12-12	4-5-6
109247	♀	206	-----	9-9	12-12	4-5-6
109248	♀	206	-----	9-9	11-12	4-5, 4-5-6
109251	♀	200	144	9-9	12-12	4-5, 4-5-6
109249	♀	205	141	9-9	11-12	4-5-6
109246	♀	199	-----	9-9	11-11	4-5-6

SALVADORA LINEATA Schmidt

Two specimens were collected, one (No. 105304) 17 miles west of Santa Caterina, Nuevo León, the other (No. 109233) 15 miles west of Galeana, Nuevo León. The former was found crawling on the highway, the latter under a rock shortly after a rainstorm.

TABLE 33.—Variation in *Salvadora lineata*

U.S.N.M. No.	Sex	Ventrals	Caudals	Supra-labials	Infra-labials	Row reduction		Preoc-ulars	Postoc-ulars
						17-15	15-13		
105304	♀	180	-----	8-8	10-11	111-109	127-125	2-3	2-2
109233	♂	183	97	8-8	10-11	132-133	157-153	2-2	2-3

SALVADORA MEXICANA (Duméril and Bibron)

One specimen (No. 109234) was collected 4 km. north of Apatzingán, Michoacán, on March 15, 1939. This specimen was discovered in a fence formed of loose rocks, with the body concealed and a small portion of the neck protruding straight up from the top of the fence, the head turned toward me as I approached. The snake made no movement, and it was quite by accident that I saw it. The stomach contained a *Sceloporus pyrrhocephalus* and a *Uta gadovi*.

Male, ventrals 183; caudals 127; supralabials 9-9; infralabials 11-11; preoculars 1-1, postoculars 2-2; temporals 2-1-2, 2-2; 4th, 5th, and 6th supralabials enter orbit.

The Museum has 14 other specimens, from the states of Colima (Colima, Nos. 31618-9, 31621-2, 61966-9; Manzanillo, Nos. 31620, 46607, 61970), Guerrero (Acapulco, No. 46341), Guanajuato (Tupátaro, No. 10230), and Michoacán (Huetamo, No. 31077).

**SIBON BREVIFACIES* (Cope)

Two specimens are in the Museum, one the type (No. 24886)⁷⁸ and another (No. 6562) from the same locality, Yucatán.

SIBON DIMIDIATUS (Günther)

Five specimens (Nos. 109903-6, HMS No. 7311) were secured at Piedras Negras, Guatemala. They were most frequently found under loose bark of fallen trees. One is in too poor condition for scale counts to be made.

The supralabials are 8-9 in one, 8-8 in the others; infralabials 9-9 in one, 9-10 in two, 10-11 in one; preoculars none in two, 1-1 in one (loreal split vertically), 2-2 in one (loreal split, and in addition a small scale split off lower corner of prefrontal); prefrontal entering orbit in all; temporals 1-2; dark body bands 24 to 31, tail bands 17 to 19.

The young are considerably different in coloration from the adults. The young were described in the field as follows: All light areas of head dark orange (burnt sienna); lower sides of head white, dorsal areas of light body bands dark orange; these areas not so broad anteriorly (2 scales), broader posteriorly (5 to 7 scales); sides of light bands, belly and tail pure white. In the single adult specimen the dark bands are light brown, with a black border; the light bands are heavily stippled with black on the 11 median scale rows, nearly white on the two outer rows. The belly is also stippled somewhat. The Museum has no others of the species.

Ventrals and caudals, respectively, in No. 7311, 191, 122; No. 109903, 189, 111; No. 109905, 200, 124; No. 109906, 194, 126.

**SIBON NEBULATUS* (Linnaeus)

A single specimen (No. 7100) in the Museum is from Tierra Caliente, Mexico.

**SIBON SANNIOLUS* (Cope)

Three specimens are in the Museum, Nos. 6564 (type)⁷⁹ and 24888 from "Yucatán," and No. 46568 from Chichen Itzá, Yucatán.

⁷⁸ Cope, 1866, p. 127.

⁷⁹ Cope, 1867b, p. 318.

**SISTRURUS CATENATUS TERGEMINUS* (Say)

A single specimen in the Museum bears the locality "Sonora" (No. 506). This was probably taken in an area now included in Arizona.

SISTRURUS RAVUS (Cope)

Eleven specimens are in the collection, eight of which were removed from the uteri of one of the three adults secured; the latter are from Cacaloapam, Puebla (No. 110594), El Limón Totalco, Veracruz (No. 110595), and Puente Colorada, Veracruz (No. 110596); the last named is the one with the young, and the other two are males. The scutellation of the adults, in the order numbered, follows: scale rows 21-21-17, 23-21-17, 25-21-17; ventrals 144, 142, 147; caudals 26, 26, 29; supralabials 11-11; infralabials 11-11, 10-10, ?-?; spots on body 28, 33, ?; spots on tail 4 in all.

The Museum has six others, from localities as follows: OAXACA: Totontepec (Nos. 46555, 46609). PUEBLA: Chalchicomula (No. 46352); Rinconada (No. 46351). VERACRUZ: South Table Land (Nos. 25050-1).

**SONORA SEMIANNULATA SEMIANNULATA* Baird and Girard

A single specimen in the Museum bears the locality "Sonora" (No. 2109, type.⁸⁰ This was probably taken in an area now included in Arizona.

**SONORA SEMIANNULATA BLANCHARDI* Stickel

A single Mexican specimen in the Museum is from Lake Santa María, Chihuahua (No. 46591).

SPILOTES PULLATUS MEXICANUS (Laurenti)

Eight specimens are as follows: CHIAPAS: La Esperanza (Nos. 110589-92); Cruz de Piedra (Nos. 110587-8); Finca Juárez (No. 110586). VERACRUZ: Xuchil, near Paraje Nuevo (No. 110593). All the Chiapas localities are in the vicinity of Escuintla. One specimen was found in a palm tree, chasing a rat. Others were seen on the ground; one was attempting to crawl up the trunk of a large tree.

The Museum has nine other specimens as follows: MEXICO: Tamaulipas (Alta Mira, No. 46387). VERACRUZ: Mirador (Nos. 25004-6); Orizaba (No. 6320); Santa María (No. 46543); hills west of Veracruz (No. 5312). CHIAPAS: Huehuetán (No. 64546); "Mexico" (No. 12098). A juvenile is marked as the adult.

⁸⁰ Baird and Girard, 1853, p. 117.

TABLE 34.—*Variation in Spilotes pullatus mexicanus*

U.S.N.M. No.	Sex	Scale rows	Ventrals	Caudals	Supralabials	Infralabials	Preoculars	Postoculars	Temporals	Lorals
110586	♀	17-18-12	218	126	8-8	9-9	1-1	2-2	1-1	1-1
110587	♀	17-18-14	217	130	8-8	10-10	1-1	2-2	1-1	0-0
110588	♀	17-18-12	215	130	8-8	9-9	1-1	2-2	1-1	1-1
110589	♀	17-18-14	218	134	8-8	10-10	1-1	2-2	1-1	0-0
110590	♀	17-18-14	218	136	8-8	8-9	1-1	2-2	1-1	1-1
110592	♀	17-18-14	215	130	8-8	8-8	1-1	2-2	1-1	1-1
110591	♂	16-18-14	207	130	8-8	9-9	1-1	2-2	1-1	1-1
110593	♂	16-18-12	205	-----	7-7	8-8	1-1	2-2	1-1	1-1

*STENORHINA DEGENHARDTII MEXICANA (Steindachner)

Ten specimens are in the Museum, from "hills west of Veracruz," Veracruz (Nos. 5313-4); Orizaba, Veracruz (No. 6322 [2]); Mirador, Veracruz (Nos. 25013-6); "Mexico" (No. 12086); Tehuantepec, Oaxaca (No. 30416). The latter probably is not from Oaxaca, as no other specimens are recorded from Pacific slopes; if the "Isthmus of Tehuantepec" is intended, then the Atlantic slopes are implied, and therefore, probably the state of Veracruz.

STENORHINA FREMINVILLII FREMINVILLII Duméril and Bibron

Two specimens (Nos. 110513-4) are from San José Lachiguiri, Oaxaca (20 km. southeast of Miahuatlán). Ventrals 174, 162, respectively; caudals 32 (♀), 40 (♂); supralabials 7-7; infralabials 7-7; preoculars 1-1; postoculars 2-2; temporals 1-2; loreal 0-0; nasal broadly in contact with preocular. Ground color gray; five dorsal black lines; belly white, unpigmented; a black temporal stripe.

The Museum has four others, from Guichicovi, Oaxaca (No. 30090), Tehuantepec, Oaxaca (No. 31415), and "Mexico" (No. 11374 [2]).

*STENORHINA FREMINVILLII APIATA Cope

Six Mexican specimens are in the Museum, from El Barrio, Oaxaca (No. 70405, type),⁸¹ Chichen Itzá, Yucatán (Nos. 46396, 46563-4), and Córdoba, Veracruz (Nos. 30518-9). The locality for the last is probably erroneous, as there is no other indication that the race occurs west of the Isthmus of Tehuantepec.

STENORHINA FREMINVILLII LACTEA Cope

One specimen (No. 110515) is from the vicinity of Tehuantepec, Oaxaca. It is a female, with 178 ventrals, 31 caudals, 7-7 infralabials

⁸¹ Cope, 1876, p. 142.

and supralabials, 1-1 preoculars, 2-2 postoculars, 1-1 loreals; latter broadly in contact with preocular and nasal. Ground color red; a black temporal stripe; a very distinct median stripe and on each side two very indistinct, irregular dark stripes (in same position as stripes of typical *f. freminvillii*); belly white, unpigmented.

The Museum has a single specimen, from Tehuantepec, Oaxaca (No. 30414).

**STORERIA DEKAYI DEKAYI* (Holbrook)

Two Mexican specimens in the Museum are from Matamoros, Tamaulipas (No. 7279 [2]).

STORERIA DEKAYI ANOMALA Dugès

One specimen (No. 110328) was secured at Tequeyutepec, Veracruz. It was found under a stone on a grassy slope in the mountains west of Jalapa, after a period of rains in the middle of the dry season.

To this subspecies are referred four other specimens in the Museum: Nos. 7081, 8939, Orizaba, Veracruz; No. 5565, Jalapa, Veracruz; and No. 32148, Jicaltepec, Veracruz. All except one of the six Veracruz specimens have the anterior chin shields transversely divided, producing three pairs of chin shields. No. 110328 has 17 scale rows, 139 ventrals, divided anal, 50 subcaudals, 7-7 supralabials and infralabials, 1-1 preoculars, 2-2 postoculars, and 1-3 temporals.

STORERIA STORERIOIDES (Cope)

Three specimens, from the following localities: 10 miles west of Villa Victoria, Mexico (No. 110327); Llano Grande, 5 miles west of Río Frío, Mexico (Nos. 110325-6). They were found under logs in high mountains (approximately 10,000 feet). Ventrals and caudals, respectively, in the order given, 128, 39 (♀); 135, ? (♀); 136, 45 (♀). Supralabials and infralabials 7-7 in all; oculars 2-2 in all; loreal present and temporals 1-2 in all.

The Museum has six others—the cotypes from "Mexico plateau between the eastern range and the Valley of Mexico" (Nos. 24987-90); Guadalajara, Jalisco (?) (No. 29125); mountains near Jesús María, San Luis Potosí (No. 46428).

Three specimens examined recently from Chilpancingo, Guerrero, do not seem notably different from the central plateau populations. They are F. M. N. H. Nos. 38346-7 and M. C. Z. No. 42663. Respectively these have ♂ 122, ♀ 132. ♀ 131 ventrals; 48 (+?), 40, 40 caudals; 7-?, 8-?, 7-7 supralabials; ?-?, 8-?, 7-7 infralabials; 2-2 postoculars and preoculars; 1-2 temporals; 1-1 loreals; 261 mm., 194 mm., 269 mm. total length; 56 mm., 40.5 mm., and 51 mm. tail length.

*SYMPHIMUS LEUCOSTOMUS Cope

Two specimens are in the Museum, from Chihuitán, Oaxaca (No. 30310),⁸² and from "Oaxaca" (No. 30311).

*SYMPHOLIS LIPPIENS Cope

Two specimens (Nos. 31345-6) are in the Museum, from "Southwestern Mexico."

TANTILLA CALAMARINA Cope

One specimen (No. 110386) from 8 km. northwest of Cuernavaca, Morelos. Found under a stone in an ancient lava flow.

Preocular very minute; prefrontals and second supralabial broadly in contact; second supralabial narrowly entering orbit on one side; temporal broadly separated from single postocular; mental in contact with chin shields; ventrals 130, caudals 27 (female).

The Museum has three others, from Mazatlán, Sinaloa (No. 6834, type of *bimaculata*⁸³), Guadalajara, Jalisco (No. 6600, type of *calamarina*⁸⁴), and Valley of Mexico and Toluca (No. 32290).

*TANTILLA CANULA Cope

Three specimens, cotypes, in the Museum are from "Yucatán" (Nos. 24880-2).⁸⁵

TANTILLA BOCOURTI (Günther)

Three specimens were secured: No. 110395, La Virgin, 22 km. north of Tehuacán, Puebla; No. 110396, 8 km. northwest of Cuernavaca, Morelos; and No. 110397, 5 miles south of Carapa, Michoacán.

In the smallest (No. 110397) the nuchal light collar crosses the tips of the parietals; in the other two the collar borders the posterior edges of the parietals. Two tiny, juxtaposed pineal light spots in two (Nos. 110395, 110397); an irregular, small light spot at anterior edge of parietal; a light spot on anterior edge of supraocular faintly visible; a larger light spot on each internasal; a middorsal dark stripe very faintly indicated in two (Nos. 110395, 110397). The young specimen is considerably darker above than the other two. The Cuernavaca specimen is more flesh-color above, while the Tehuacán specimen is light gray. There is faint evidence of pigment on the lower labials.

The secondary temporal is scalelike (about as long as broad), the sixth labial is higher than the fifth; the first infralabials are in contact medially; the frontal is broadest in the Michoacán specimen

⁸² Cope, 1869, p. 150; Gaige, 1936, p. 300.

⁸³ Cope, 1867b, p. 320.

⁸⁴ Cope, 1876, p. 143.

⁸⁵ Cope, 1876, p. 144.

(1.5×2 mm.), narrowest in the Tehuacán specimen (1.7×2.6 mm.); the sides of the frontal are convergent posteriorly in the latter specimen, parallel in the other two. A loreal is present on one side in one (No. 25032, Mirador, split off the preocular) and on both sides of another (No. 110396, split off the prefrontals).

The Museum has two other specimens (Nos. 25032-3), from Mirador, Veracruz.

Ventrals and caudals, respectively, in No. 110395, 164, 57 (♂); No. 110396, 181, 49 (♀); No. 110397, 180, 57 (♂); No. 25032, 179, 61 (♂); No. 25033, 179, 65 (♂).

TANTILLA JANI (Günther)

Two specimens (Nos. 110377-8) were secured at La Esperanza, Chiapas. One was found during the dry season (April 12) in a rotten log. The other was routed from its hiding quarters under leaves during the day in the wet season (June 3). Both are females, with 154 and 150 ventrals, 45 and 44 caudals, respectively. The dorsal stripe is confined to the vertebral scale row; all scales in that row are dark-edged posteriorly.

The Museum has no others of the species.

***TANTILLA MINIATA** Cope

A single specimen (No. 25031) in the Museum is from Mirador, Veracruz.⁸⁶

***TANTILLA MOESTA** (Günther)

Two specimens in the Museum are from Yucatán (Nos. 6565, 24883).

TANTILLA NIGRICEPS NIGRICEPS Kennicott

Tantilla nigriceps nigriceps SMITH, Zoologica, vol. 27, p. 38, 1942.

One specimen (No. 104674) is from Río Santa María, Chihuahua (near Progreso). Ventrals 158 (female), tail injured. Black cap of head pointed posteriorly, the apex extending four scales posterior to parietals.

The Museum has no others from Mexico; in fact, this is the only specimen known as yet from Mexico.

***TANTILLA NIGRICEPS FUMICEPS** (Cope)

Two Mexican specimens in the Museum are from Mier, Tamaulipas (Nos. 46584-5).⁸⁷

⁸⁶ Cope, 1863, p. 100.

⁸⁷ Smith, 1938, p. 150.

TANTILLA PHRENITICA Smith

Tantilla phrenitica SMITH, *Zoologica*, vol. 27, p. 39, 1942.

Seven specimens are in the collection, all from Cuautlapan, Veracruz (Nos. 110379-85).

The upper and lower labials are 7-7 in all except one, which has 6-7 lower labials; preoculars 1-1, postoculars 2-2 in all. Collar involves tips of parietals in four, borders them in three; the first infralabials are separated medially in all.

The Museum has one other Mexican specimen, from Totontepec, Oaxaca (No. 20835), and a specimen from Guatemala (No. 38134).

TABLE 35.—*Variation in Tantilla phrenitica*

U.S.N.M. No.	Sex	Ventrals	Caudals	U.S.N.M. No.	Sex	Ventrals	Caudals
110379	♀	139	37	110382	♂	139	43
110381	♀	137	40	110383	♂	140	43
20835	♀	147	36	110380	♂	141	42
38134	♀	136	37	110384	♂	140	37
110385	♀	138	36				

TANTILLA RUBRA Cope

Eight specimens, one from 22 km. north of Tehuacán, Puebla (No. 110387), the others from the vicinity of Tehuantepec, Oaxaca (Nos. 110388-94). The Tehuacán specimen was found inside a large mound of *Mammillaria* cactus, but already dead, stiffened, and slightly discolored. It seemed to have no injury. The Tehuantepec specimens were found under piles of earth, brush, and leaves in banana patches. The largest specimen (No. 110388) measures 353 mm. in total length (tip of tail missing).

The upper and lower labials are 7-7 in all, the preoculars 1-1, postoculars 2-2. The first infralabials are in contact medially, and the nuchal collar involves the tips of the parietals in all.

TABLE 36.—*Variation in Tantilla rubra*

U.S.N.M. No.	Sex	Ventrals	Caudals	U.S.N.M. No.	Sex	Ventrals	Caudals
110389	♀	158	63	110388	♀	153	-----
110391	♀	160	66	110390	♀	148	-----
110392	♀	155	-----	110393	♀	158	64
110387	♀	159	68	110394	♀	151	64

The Museum has two others, from the vicinity of Tehuantepec (Tapana and Barrios, Nos. 26500, 30530).

TANTILLA STRIATA Dunn

Four specimens were secured; one is a topotype, from Mixtequilla, Oaxaca (No. 110375); another is from La Concepción, about 40 km. west of Tehuantepec (HMS No. 18518); a third is from Cajón de Piedra, west of Salina Cruz, Oaxaca (No. 110376); the last is from Las Pilas, 20 km. southwest of Tehuantepec, Oaxaca (No. 110585).

The upper and lower labials are 7-7, the preoculars 1-1, postoculars 2-2 in all; the mental is in contact with the anterior chinshields.

The Museum has no others of the species.

Ventrals and caudals, respectively, in No. 110375 (♀), 160, 34; No. 110376 (♂), 157, 42; No. 18518 (♂), 163, 37.

TANTILLA WILCOXI RUBRICATA Smith

Tantilla wilcoxi rubricata SMITH, Zoologica, vol. 27, pp. 40-41, 1942.

The two types (Nos. 110398-9) were found under stones in a semi-arid region, during a period of drizzling showers, 15 miles southeast of Galeana, Nuevo León.

The Museum has no others of this race.

Of considerable interest are five specimens (77241[3]-77242[2]) in the Museum of Zoology, University of Michigan, from Charcas, San Luis Potosí. All have 7-7 supralabials and the mental separated from the chin shields, but in other characters of scutellation there is considerable variation. The preocular is fused with the prefrontal on one side in one (1-1 in others); the postoculars are 2-2 except in one which has the lower scale fused with the 4 supralabials; the prefrontal is in contact with the labials in three; there are 4-4 infra-labials in one (several scales fused) 6-7 in one, and 7-7 in three; and the secondary temporal is elongate on one side in one, on both sides in two, but divided on both sides of two and on one side of one. The scale rows are reduced to 13 posteriorly in one specimen. Variation in ventral and caudal count is given in table 37.

TABLE 37.—*Variation in Tantilla wilcoxi rubricata*

Sex	Ventrals	Caudals	Total length	Tail length	Sex	Ventrals	Caudals	Total length	Tail length
♂	152	-----	239+	42+	?	155	-----	-----	-----
♂	145	59+	250	59	♀	147	54	199	43.5
♀	152	55	219	51					

In head pattern these specimens agree exactly with the types of *rubricata*. The dark head cap (which is dark gray, not jet black) fades below the level of the orbit on the sides of the head, reaching the tip only in the posterior temporal region. The light nuchal collar is distinct, with a narrow, dark posterior border, and involves the tips of the parietals.

In head pattern it is impossible to allocate these specimens with anything but *w. rubricata*. From this, however, they differ in having the mental separated from the chinshields (separated on one side in the type), and in having more numerous ventrals (140, 144, 146 in other *w. rubricata*, as against 145 to 155 in the present series). In spite of these differences I believe it best to associate these specimens with *w. rubricata*; the total range in ventral counts is not unduly large, and the mental character is admittedly variable. They have nothing to do with *bocourti*, which has divided secondary temporals, as that species has 164 or more (to 185) ventrals. *T. deviatricis* has a broader collar and different head pattern, as well as perhaps a higher average number of ventrals (154 to 160). *T. atriceps* has a narrower collar and fewer ventrals (139 or less, with no close approach to *w. rubricata* when sexes are separated). Apparently the only other form approached by these specimens is *w. wilcoxi*; their higher counts nearly or quite reach those of the latter race. Three males of *w. wilcoxi* have 152 to 155 ventrals, and one has 62 caudals (145 to 152 ventrals, 54 to 59 caudals, in four *w. rubricata*); three females of *w. wilcoxi* have 159 to 164 ventrals, and two have 64 and 67 caudals (146 to 155 ventrals, 51 to 55 caudals, in four *w. rubricata*).

TANTILLITA LINTONI (Smith)

Tantilla lintoni SMITH, Proc. Biol. Soc. Washington, vol. 53, pp. 61-62, fig. 1, 1940.
Tantillita lintoni SMITH, Journ. Washington Acad. Sci., vol. 31, pp. 115-117, 1941.

The type (No. 108603) was found at night wriggling over the surface of leaves near a trail near Piedras Negras, Guatemala.

The Museum has no others of the species.

***THAMNOPHIS ANGUSTIROSTRIS** (Kennicott)

A single specimen, the only known, is in the Museum, from Alamo de Parras, Coahuila (No. 959, type).⁸⁸

THAMNOPHIS CHRYSOCEPHALUS (Cope)

Three specimens were secured, one above Acultzingo, Veracruz (No. 110774), the other two at Pájaro Verde, Puebla (Nos. 110775-6).

The Museum has 12 other specimens, from the states of Veracruz (Orizaba, Nos. 7077 [6], 30494 [type]⁸⁹), Oaxaca (Mountain Zempoal-

⁸⁸ Kennicott, 1860, p. 332; Smith, 1942f, pp. 120-121.

⁸⁹ Cope, 1885a, pp. 173-174.

tepec, No. 46446; Totontepec, Nos. 46445, 46610), and Guerrero (Omiteme, Nos. 46342, 47747). Other specimens recorded in table 38 are from Acultzingo, Veracruz (EHT-HMS Nos. 21536-8); Xuchil, Veracruz (F. M. N. H. No. 1519); Omiteme, Guerrero (EHT-HMS Nos. 23778, 23780, 23782); and Cerro San Felipe, Oaxaca (EHT-HMS No. 5556).

TABLE 38.—*Variation in Thamnophis chrysocephalus*

Museum No.	Sex	Scale rows	Ventrals	Caudals	Supra-labials	Infra-labials	Pre-oculars	Post-oculars
U.S.N.M. No. 7077	♀	17-17-15	147	---	8-8	9-9	1-1	3-3
U.S.N.M. No. 7077d	♀	17-17-15	145	75	8-8	9-10	1-1	3-3
U.S.N.M. No. 46445	♀	17-17-15	147	71	8-8	9-9	1-1	2-3
U.S.N.M. No. 46446	♀	17-17-15	154	---	8-8	10-10	1-1	2-3
U.S.N.M. No. 110774	♀	17-17-15	148	70	8-8	9-10	1-1	3-3
U.S.N.M. No. 110775	♀	17-17-15	145	72	8-8	10-11	1-1	3-3
EHT-HMS No. 23778	♀	17-17-15	148	65	8-8	10-10	1-1	3-3
EHT-HMS No. 23782	♀	17-17-15	151	71	8-8	10-10	1-1	3-3
EHT-HMS No. 21536	♂	17-17-15	149	77	8-8	10-12	1-1	3-3
EHT-HMS No. 21537	♂	17-17-15	152	80	7-8	10-10	1-1	3-3
EHT-HMS No. 21538	♂	17-17-15	148	79	8-8	10-10	1-1	3-3
EHT-HMS No. 23780	♂	17-17-15	146	80	8-8	10-10	1-1	3-3
EHT-HMS No. 5556	♂	17-17-15	146	76	8-8	10-10	1-1	3-3
F.M.N.H. No. 1519	♂	17-17-15	148	77	8-9	10-10	1-1	3-3
U.S.N.M. No. 7077a	♂	17-17-15	149	---	8-8	10-10	1-1	3-3
U.S.N.M. No. 7077b	♂	17-17-15	154	---	8-8	10-10	1-1	3-3
U.S.N.M. No. 7077c	♂	17-17-15	149	78	8-8	8-9	1-1	3-3
U.S.N.M. No. 7077e	♂	17-17-15	151	81	8-8	10-10	1-1	3-3
U.S.N.M. No. 30494	♂	17-17-15	153	80	8-8	9-10	1-1	3-3
U.S.N.M. No. 46342	♂	17-17-15	148	77	8-8	10-10	1-1	3-3
U.S.N.M. No. 46610	♂	17-17-15	148	77	8-8	10-10	1-1	2-3
U.S.N.M. No. 47747	♂	17-17-15	142	83	8-8	10-10	1-1	4-4
U.S.N.M. No. 110776	♂	17-17-15	146	82	8-8	10-10	1-1	3-4

THAMNOPHIS EQUUS EQUUS (Reuss)

Thamnophis equus equus SMITH, Zoologica, vol. 27, pp. 106-107, 1942.

A series of seven specimens is from Tacicuaró, Michoacán (Nos. 110777-83).

The Museum has 19 other specimens, as follows: DURANGO: Huasamota (No. 46482); Durango (No. 8066). GUANAJUATO: Nos. 9892, 9899 (type of *pulchrilatus*),⁹⁰ 14433-4, 25363, 26147-8. MEXICO: Nochitongo Ditch, 30 miles north of Mexico City (No. 19003). MICHOACÁN: Los Reyes (No. 46463). OAXACA: Huajuapam (No. 46605). SINALOA: Rosario (No. 46457). VERACRUZ: Las Vigas (No. 46432); Mirador

⁹⁰ Cope, 1885a, p. 174.

(No. 25038); Orizaba (No. 30496). ZACATECAS: San Juan Capistrano (No. 46423). Two (Nos. 32279-80) without locality.

THAMNOPHIS EQUUS CYRTOPSIS (Kennicott)

Thamnophis equus cyrtopsis SMITH, Zoologica, vol. 27, p. 108, 1942.

One specimen (No. 105303) is from 21 miles north of Saltillo, Coahuila.

The Museum has 14 others from Mexico: CHIHUAHUA: Arroyo del Alamos, Casas Grandes (No. 42876); Cajón Bonito Creek (No. 21056); Chihuahua (No. 14256); Guadalupe y Calvo (Nos. 46356-8); San Luis Mountains (Nos. 21057-8). COAHUILA: Rinconada (No. 8067, type of *cyrtopsis*). DURANGO: Guanacevi (No. 46367). NAYARIT: Santa Teresa (Nos. 46420-1). SAN LUIS POTOSÍ: Hacienda La Parada (No. 46410). SONORA: Guadalupe Cañon (No. 21059).

THAMNOPHIS MACROSTEMMA MACROSTEMMA (Kennicott)

Nine specimens were secured: Chimalhuacán, Mexico (Nos. 110784-7); 7 miles west of Villa Victoria, Mexico (No. 110788); Pátzcuaro, Michoacán (Nos. 110789-91); and Tecamachalco, Puebla (No. 110792).

TABLE 39.—*Variation in Thamnophis macrostemma macrostemma*

U.S.N.M. No.	Sex	Scale rows	Ventrals	Caudals	Supra- labials	Infra- labials	Preoculars	Postoculars
110784	♂	19-21-17	161	76	8-8	-----	-----	-----
110788	♂	20-21-17	163	77	8-8	9-10	1-1	3-4
110790	♂	21-21-17	165	-----	8-8	10-12	1-1	3-3
110791	♂	21-21-17	164	75	8-8	10-11	1-1	3-3
110792	♂	19-21-17	164	68	8-8	10-11	1-1	3-3
110785	♀	19-21-17	157	71	8-8	10-10	1-1	3-3
110786	♀	19-21-17	155	65	8-8	10-10	1-1	3-4
110787	♀	21-21-17	160	66	8-8	10-10	1-1	3-3
110789	♀	21-21-18	154	67	8-8	10-11	1-1	3-3

The Museum has 47 others, as follows: DISTRITO FEDERAL: Mexico City (No. 7247); La Viga Canal (Nos. 18997-19002); Chapultepec (Nos. 32163-4). GUANAJUATO (Nos. 15427-8, 17434-6). JALISCO: Atemajac (Nos. 46383-4); Magdalena (No. 67371); Ocotlán No. 46544). MEXICO: Lerma (Nos. 46599-600); Toluca (No. 32282). MICHOACÁN: Tupátaro (No. 11366 [2]). OAXACA: Mitla (No. 46500). PUEBLA: Atlixco (No. 46431). SAN LUIS POTOSÍ: La Parada (Nos. 46407-9). VERACRUZ: Mirador (No. 25039). INDEFINITE LOCALITY: Nos. 12725, 12727, 14597, 14606, 24991-5, 25254-7, 26143-6, 46359.

THAMNOPHIS MACROSTEMMA MEGALOPS (Kennicott)

Seventeen specimens were collected near Progreso, Chihuahua (Nos. 104633, 104642-57).

TABLE 40.—Variation in *Thamnophis macrostemma megalops*

U.S.N.M. No.	Sex	Scale rows	Ventrals	Caudals	Supra-labials	Infralabials	Preoculars	Postoculars
104633	♀	21-21-17	154	-----	8-8	10-10	1-1	3-3
104642	♀	21-21-17	157	-----	8-8	10-11	1-1	3-3
104646	♀	21-21-17	160	-----	8-8	11-11	1-1	3-3
104648	♀	21-21-17	160	-----	8-8	11-11	1-1	3-3
104649	♀	21-21-17	159	-----	8-9	11-11	1-1	3-4
104650	♀	21-21-17	154	72	8-8	10-11	1-1	3-4
104653	♀	21-21-17	161	73	8-8	10-11	1-1	3-3
104654	♀	21-21-17	157	69	8-9	10-11	1-1	3-3
104643	♂	21-21-17	161	-----	8-8	10-11	1-1	3-3
104644	♂	21-21-17	167	-----	8-8	10-10	1-1	3-3
104645	♂	21-21-17	166	82	8-8	10-10	1-1	3-3
104647	♂	21-21-17	162	82	8-8	10-10	1-1	3-3
104651	♂	21-21-17	166	-----	8-8	10-10	1-1	3-3
104652	♂	21-21-17	164	81	8-8	10-11	1-1	3-3
104655	♂	21-21-17	162	81	8-8	10-?	1-1	3-3
104656	♂	21-21-17	171	-----	8-8	10-10	1-1	3-3
104657	♂	21-21-17	163	79+	8-?	?-?	1-?	3-?

The Museum has 18 others from Mexico, as follows. SONORA: Santa Magdalena (No. 965; Tucson, Ariz.?). DURANGO: Ada Magdalena (No. 46366). CHIHUAHUA: Casas Grandes (No. 46377); Colonia García (No. 46335); Santa Rosalia (No. 46542); Sierra Madre (No. 46506); Chihuahua City (Nos. 14226 [2], 46448); "Chihuahua" (Nos. 7248, 14258, 14277 [2], 14289 [2], 14292, 45596). NAYARIT: ?Santa Teresa (No. 46429).

THAMNOPHIS MARCIANUS (Baird and Girard)

Thamnophis marcianus SMITH, Zoologica, vol. 27, p. 114, 1942.

Eight specimens (Nos. 104634-41) were collected near Progreso, Chihuahua.

The Museum has 26 others from Mexico, as follows: CHIHUAHUA: 15 leagues north of Guerrero (No. 46583); Ojos del Diablo (No. 30837). "SONORA": No. 7235. TAMAULIPAS: Charco Escondido (No. 849); Matamoros (Nos. 15344, 861 [19], 5491); 38 miles south of Reynosa (No. 95183).

THAMNOPHIS MELANOGASTER MELANOGASTER (Peters)

Thamnophis melanogaster melanogaster SMITH, Zoologica, vol. 27, pp. 116-117, 1942.

Six specimens were secured, at Chimalhuacán, Mexico (Nos. 110793-8), where the species is common in irrigation ditches.

The Museum has two other specimens (Nos. 12726, 12729), from Mexico, D. F.

THAMNOPHIS MELANOGASTER CANESCENS Smith

Thamnophis melanogaster canescens SMITH, Zoologica, vol. 27, pp. 117-120, 1942.

Two specimens were secured, one (No. 110799) at La Palma, Michoacán, the other at Tacécuaro, Michoacán (No. 110800). Both are paratypes.

The Museum has 14 other specimens referred to this race: Nos. 11365 (2), 14604, 26149-50, probably from Guanajuato (Dugès, coll.); Nos. 23985-9, from Durango, Durango; and Nos. 46411-4, Hacienda La Parada, San Luis Potosí.

***THAMNOPHIS ORDINOIDES ERRANS Smith**

A single specimen, the type, in the Museum is from Colonia García, Chihuahua (No. 46336).⁹¹

***THAMNOPHIS PHENAX PHENAX (Cope)**

Five specimens⁹² are in the Museum, from "Alpine region, Orizaba, Veracruz" (No. 7079 [3]), and Córdoba, Veracruz (Nos. 30498-9, latter type⁹³). It seems probable that the locality data for one or the other of these series are incorrect.

THAMNOPHIS PHENAX HALOPHILUS Taylor

Thamnophis phenax halophilus SMITH, Zoologica, vol. 27, p. 100, 1942.

A single specimen (No. 110801) was collected at Tequeyutepec, Veracruz.

The Museum has no others of this subspecies.

A specimen in the Museum of Comparative Zoology (No. 27114) recently examined closely agrees with the above specimen. It bears the locality data "Alpine region, Orizaba" and was collected by François Sannicrast. It is a male with 19-19-17 scale rows, 154 ventrals, 71 (+?) subcaudals, 8-8 supralabials, 11-11 infralabials, 1-1 preoculars, 3-3 postoculars, and 1-2-3 temporals; it measures 579 mm. in total length, and 131 mm. in tail length. The light parietal

⁹¹ Smith, 1942f, pp. 112-114.

⁹² Cope, 1868a, p. 134; Ruthven, 1908, p. 131.

⁹³ Smith, 1942f, pp. 99-100.

spots are present, surrounded by a very narrow border of black; in this respect only it differs in pattern from the above. In the other specimens of this race the black areas on the parietals are more extensive. The lack or dimness of the stripes and the presence of the light, dark-edged parietal spots are the chief characters distinguishing this from *eques*, which occurs in the same vicinity although perhaps not in exactly the same localities. There are 26 maxillary teeth in the above specimen.

It is probable that *phenax* is, as most other authors have supposed but I had refused to believe, a lowland form; a specimen recently acquired by the University of Michigan Museum of Zoology, from Potrero Viejo, Veracruz (No. 89363), is from about the same elevation as Córdoba, the type locality. Since the latter is the only specimen known aside from series collected many years ago by Sumichrast, much remains to be discovered of the normal range of the race. Tentatively it must be concluded that *phenax phenax* is a lowland race intergrading at higher elevations with *phenax halophilus*; thus the locality data on U.S.N.M. No. 7079 (instead of that of the type), said to be from "Orizaba, Alpine Region," must remain in doubt. Both forms are so rare that the possibility that they are near extinction is suggested.

The Potrero Viejo specimen of *p. phenax* is a female with 19-19-17 scale rows, 152 ventrals, 63 caudals, 8-8 supralabials, 10-11 infralabials, 1-1 preoculars, 4-4 postoculars, a total length of 323 mm., tail 70 mm. All markings are very dim, since the snake unfortunately was killed shortly before shedding; however, about 38 dark cross bands can be discovered on the body separated from each other by narrow, transverse light bands covering the length of about one scale row; the posterior edges of the third, fifth, and seventh supralabials are dark; an irregular dark-edged, elongate light spot on the suture between the parietals can be discerned; the belly is grayish, darker posteriorly and on tail.

Another specimen of *phenax phenax* (M.C.Z. No. 45688) is said to be from Tequeyutepec, Veracruz; this, as the University of Michigan specimen, was collected by Dyfrig McH. Forbes. It is a male with 19-19-17 scale rows, 154 ventrals, 73 caudals, 7-8 supralabials, 10-10 infralabials, 1-1 preoculars, 3-3 postoculars, a total length of 298 mm., tail 71 mm. Although this, like the preceding, was about to shed when caught, the pattern is fairly distinct; there are 45 broad blotches on the body; the posterior edges of all supralabials except the last are black, and the last has a dark anterior edge; an elongate light streak, with undulating lateral margins, occupies the median parietal suture, and is bounded on either side by a large dark spot that occupies most of the parietal; there are large irregular dark marks on other dorsal

head scales. Whether this specimen actually was collected near Tequeyutepec is not certain. It does not seem probable that the form occurs both at Potrero and at Tequeyutepec, although this is not impossible; also it does not seem probable that *p. phenax* would occur with *p. halophilus* at Tequeyutepec, although this also is not impossible; if the latter is true, then some doubt is thrown upon the association of the two forms as subspecies. Data available at present are much too inadequate for the formation of definite conclusions.

THAMNOPHIS RUFIPUNCTATUS (Cope)

Thamnophis rufipunctatus SMITH, Zoologica, vol. 27, pp. 120-121, 1942.

Four specimens were secured near Progreso, Chihuahua (Nos. 104658-61).

The Museum has 15 other specimens, from Mexico, as follows: Guanacevi, Durango (No. 46369); Meadow Valley, Chihuahua (No. 26592); Río Casas Grandes (No. 26791); Arroyo del Alamos, 70-74 km. south of Nueva Casas Grandes, Chihuahua (Nos. 42874-5); Chihuahua (Nos. 14254, 14261 (2), 14265, 14271, 14275, 14286, 14288); Río Papagochic, Guerrero, Chihuahua (No. 95607); Guadalupe y Calvo (No. 46368).

THAMNOPHIS RUTHVENI Hartweg and Oliver

Thamnophis ruthveni SMITH, Zoologica, vol. 27, p. 114, 1942.

A single topotype, from near Tehuantepec, Oaxaca (No. 110802), was collected.

The Museum has one other, from Chivela, Oaxaca (No. 46364).

THAMNOPHIS SAURITUS CHALCEUS (Cope)

One specimen (No. 110805) was secured at Jonuta, Tabasco. It is a male with 150 ventrals and 92 caudals.

The Museum has three others from Mexico, from Montecristo, Tabasco (No. 46548); Puerto Morelos, Yucatán (No. 46530), and Cozumel Island (No. 13906, type of *rutiloris*).⁹⁴

THAMNOPHIS SAURITUS PROXIMUS (Say)

Thamnophis sauritus proximus SMITH, Zoologica, vol. 27, p. 116, 1942.

Three specimens were secured, one (No. 105305) at Hacienda La Clementina, near Forlón, Tamaulipas, and two (Nos. 110803-4) near Acultzingo, Veracruz. The ventrals of these, in the above order, are 160, 159, 160; caudals 102+ (♂), 97 (♂), 98 (♀).

⁹⁴ Cope, 185b, pp. 388-389.

The Museum has eighteen others from Mexico: NUEVO LEÓN: Caderita (No. 749). TAMAULIPAS: Matamoros (Nos. 5484, 15343); Hidalgo (No. 46435). VERACRUZ: Gutierrez Zamora (No. 46525); Jalapa (No. 5487 [2]); Orizaba (Nos. 755 [2], 7080 [2], 30355-6, 46449); Tuxpan (Nos. 25190-1). OAXACA: "Tehuantepec" (Nos. 30161-2) (in error?).

THAMNOPHIS SCALARIS SCALARIS Cope

Thamnophis scalaris scalaris SMITH, Zoologica, vol. 27, pp. 100-101, 1942.

A single specimen is from Cruz Blanca, Veracruz (No. 110806), found under a fallen pine log.

The Museum has seven other specimens, all from "Orizaba," Veracruz (Nos. 7076 [4], 12115-6, 30497).

THAMNOPHIS SCALARIS GODMANI (Günther)

Thamnophis scalaris godmani SMITH, Zoologica, vol. 27, pp. 101-103, 1942.

Four specimens are from above Acultzingo, Veracruz (Nos. 110807-9), San Diego, Puebla (No. 110810), and Pájaro Verde, Puebla (No. 110811).

The Museum has two others, from Oaxaca, Oaxaca (Nos. 46534, 46604).

THAMNOPHIS SCALARIS SCALIGER (Jan)

Thamnophis scalaris scaliger SMITH, Zoologica, vol. 27, pp. 103-104, 1942.

Seven specimens are from Popocatepetl (No. 110815), Zempoala (No. 110816), and 15 km. west of Toluca (Nos. 110812-4), Mexico; and 2 miles east of Río Frío, in Puebla (Nos. 110817-8).

The Museum has four others, from Nahuatzén, Michoacán (No. 46553); Mexico City, D. F. (No. 12730); Toluca, México (No. 32281); and Guanajuato (No. 12675).

*THAMNOPHIS SIRTALIS PARIETALIS (Say)

A single Mexican specimen is in the Museum from Casas Grandes, Chihuahua (No. 46371).⁹⁵

THAMNOPHIS SUMICHRASTI SUMICHRASTI (Cope)

Thamnophis rozellae SMITH, Proc. Biol. Soc. Washington, vol. 53, pp. 56-57, 1940.

Thamnophis sumichrasti suntichrasti SMITH, Zoologica, vol. 27, pp. 110-111, 1942.

Three specimens were secured, the type of *rozellae* (No. 108597) from Palenque, Chiapas, and two paratypes (Nos. 108598-9) from Aguacate, Chiapas.

In addition the Museum has the type and paratype of *sumichrasti*

⁹⁵ Smith, 1942f, p. 114.

(Nos. 26501-2)⁹⁶ from "Orizaba," Veracruz; a specimen from Montecristo, Tabasco (No. 46549); and another from "Guatemala" (No. 25234).

**THAMNOPHIS SUMICHRASTI PRAEOULARIS* (Bocourt)

Two specimens are in the Museum, from Puerto Morelos, Yucatán (Nos. 46528-9).⁹⁷

**TOLUCA CONICA* Taylor and Smith

Six specimens⁹⁸ are in the Museum, from Guajamaloya, Oaxaca (No. 46535, paratype), and "Mexico" (Nos. 30553, 31361, 31363-5).

TOLUCA LINEATA LINEATA Kennicott

Toluca lineata lineata TAYLOR and SMITH, Univ. Kansas Sci. Bull., vol. 28, pp. 343-346, 1942.

Nine specimens were collected, at the following localities: VERACRUZ: Cruz Blanca (No. 110747); El Limón Totalco (Nos. 110744-6). MÉXICO: 15 km. west of Toluca (Nos. 110751-4); 10 miles west of Villa Victoria (No. 110755).

TABLE 41.—*Variation in Toluca lineata lineata*

U.S.N.M. No.	Sex	Ventrals	Caudals	Supralabials	Infralabials	Postoculars	Loreals
110744	♀	128	30	7-7	7-7	2-2	0-0
110745	♀	127	30	7-7	7-7	2-2	1-1
110746	♂	116	41	7-7	6-7	2-2	0-0
110747	♂	119	37	7-7	6-7	2-2	1-1
110751	♀	124	27	7-7	7-7	1-1	0-0
110752	♀	124	26	7-7	7-7	1-2	1-1
110753	♀	126	28	7-7	7-7	1-1	0-0
110754	♂	119	34	7-7	7-7	2-2	0-1
110755	♂	117	37	7-7	7-7	1-2	0-0

The internasals and prefrontals are present in all; scale rows 17-17; preoculars 1-1; temporals 1-1 on one side of one, but otherwise 1-2; posterior chin shields separated in all; there are no entire caudal scales in any specimen.

The Museum has eight other specimens, from Tulancingo, Hidalgo (No. 36271); Valley of Mexico (Nos. 2103-4, 32379); Guanajuato (No. 9913); ?Puebla (No. 30553); mountains near San Luis Potosí, S. L. P. (No. 46427); and Nahuatzén, Michoacán (No. 46426).

⁹⁶ Cope, 1867a, p. 306.

⁹⁷ Smith, 1942f, p. 111.

⁹⁸ Taylor and Smith, 1942b, pp. 340-343.

TOLUCA LINEATA ACUTA (Cope)

Toluca lineata acuta TAYLOR and SMITH, Univ. Kansas Sci. Bull., vol. 28, pp. 346-348, 1942.

Two typical specimens (Nos. 110761-2) are from Cacaloapan, Puebla. The first is a male, the second a female. Respectively the ventrals are 119, 128; caudals 38, 32; supralabials and infralabials 7-7; preoculars 1-1; postoculars 2-2; temporals 1-2, 1-2 (2-2); total length 228 mm., 123 mm.; tail length 45 mm., 19 mm.

The Museum has one other specimen, the type (No. 30552), said to be from Juchitán, Oaxaca, but almost certainly not.

TOLUCA LINEATA VARIANS (Jan)

Toluca lineata varians TAYLOR and SMITH, Univ. Kansas Sci. Bull., vol. 28, pp. 348-350, 1942.

Sixty-three specimens were secured, above Acultzingo, Veracruz (Nos. 110671-725), near Puente Colorada, Veracruz (Nos. 110748-50), and at Pájaro Verde, Puebla (Nos. 110760, 110756-9). One of these, when discovered by turning a stone, flattened the fore part of the body somewhat as an *Heterodon* or *Ninia*. No other specimen of the genus has been observed to do so by me. All were found under stones.

The Museum has two others, No. 30551 from "Mexico" (Sumichrast), and No. 110957 from Orizaba, Veracruz.

The veracity of the locality data on these specimens cannot be doubted, since practically all were collected by my wife and me. Although three localities are cited, all are within a radius of half a mile and in the same sort of terrain. Five of this series have 15 scale rows posteriorly (2♂, 3♀), and one (♀) has 16; all others have 17 scale rows throughout the body. In 29 females the ventrals vary from 128 to 138, average 133.1 (128, 3; 129, 3; 130, 1; 131, 1; 132, 3; 133, 4; 134, 7; 135, 3; 136, 1; 138, 3); in 33 males they vary from 119 to 127, average 123.4 (119, 2; 120, 3; 122, 2; 123, 8; 124, 8; 125, 6; 126, 3; 127, 1). The caudals vary in 27 females from 29 to 36, average 32.9 (29, 1; 30, 2; 31, 3; 32, 4; 33, 7; 34, 5; 35, 4; 36, 1); in 31 males they vary from 36 to 44, average 40.5 (36, 1; 37, 2; 38, 2; 39, 4; 40, 6; 41, 5; 42, 5; 43, 5; 44, 1). There is one entire subcaudal scale in one specimen; in all others all the caudals are entire. The posterior chin shields are separated in 35 (16♀, 19♂), in contact in 28 (13♀, 15♂). The minimum rows of scales from the chin shields to the first full width (first counted) ventral vary from 2 to 6. The total ventral counts, including these small scales, from chin shields to anal plate, vary from 131 to 142 in females, 122 to 131 in males; in both sexes the range of variation is increased by 1, but also both variation curves are somewhat smoothed (females, 131, 1; 132, 2; 133, 2; 134, 3; 135, 2;

136, 3; 137, 4; 138, 4; 139, 4; 140, 1; 142, 3; in males, 122, 1; 123, 1; 124, 2; 125, 1; 126, 4; 127, 8; 128, 7; 129, 4; 130, 3; 131, 2); this possibly indicates that, with larger series, the more accurate measurement of ventral scale number is secured by counting all ventral scales from chin shields to anal, as both the obvious variation in the position of

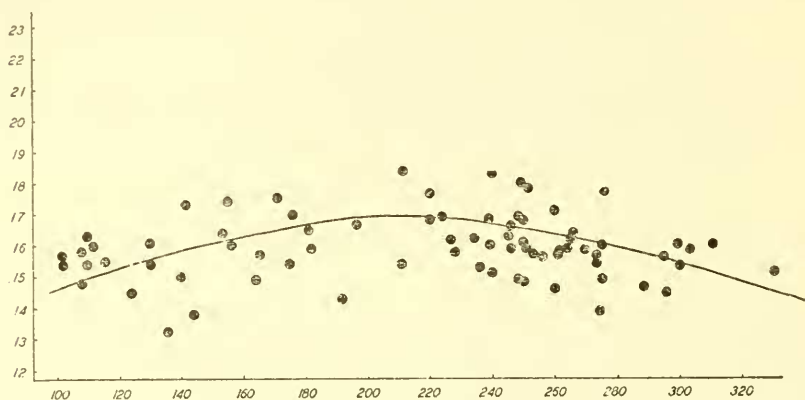


Fig. 14.—Variation in tail-total length proportion (abscissa) plotted against total length (coordinate) in females of *Toluca l. varians*.

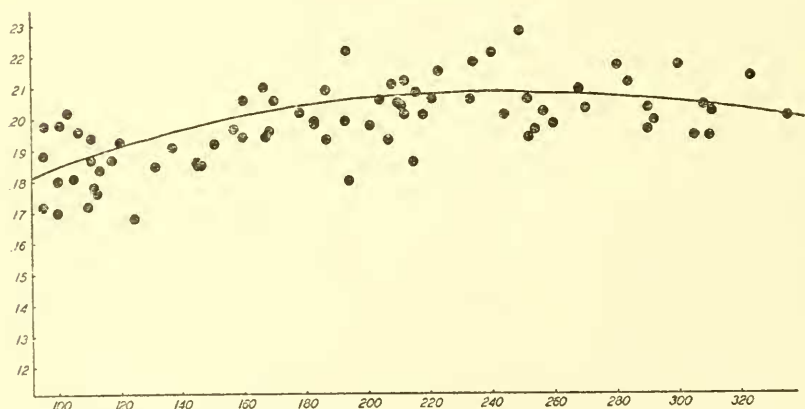


Fig. 15.—Variation in tail-total length proportion (abscissa) plotted against total length (coordinate) in males of *Toluca l. varians*.

the first ventral, as well as the human variable introduced by the necessity of arbitrarily deciding which ventral should be counted as first, are eliminated; larger series will be necessary, however, to demonstrate whether this indication is true.

Without exception the supralabials are 7-7. The infralabials are normally 7-7, but in six specimens (three of each sex), there are 6-7

(the loss caused by fusion of the sixth and seventh labials in two, by second and third in two, and by fourth and fifth in one; in one the sixth labial is eliminated from the labial border by contact of 5 and 6); in 13 (8 ♂, 5 ♀) there are 7-8, and in three (2 ♂, 1 ♀) there are 8-8. In all the preoculars are 1-1, the postoculars 2-2; in all but three the temporals are 1-2, and in the exceptions they are 1-1. Without exception the loreal is present on both sides. All have 2 internasals and 2 prefrontals; in one a large, azygous scale between the prefrontals is partially formed. In no specimen do the prefrontals contact the labials. The second supralabial contacts the preocular on one side in 9 (5 ♀, 4 ♂), on both sides in 13 (1 ♀, 12 ♂).

The percent of the total length comprised by the tail length varies from 12.8 to 17.5 in females, and from 16.8 to 21.7 in males. The percentages tend to increase more sharply and over a longer period in males than in females, as shown in figures 14, 15. The maximum percentages in males are reached at about 250 to 275 mm. total length, while in females they are reached at about 210 to 245 mm. snout to vent.

One specimen (No. 110746) has a number of well-developed young, nearly ready for birth, in the uteri.

TOLUCA LINEATA WETMOREI, new subspecies

Holotype.—U.S.N.M. No. 110727, male, collected at Pan de Olla, Veracruz.

Paratypes.—Sixty-eight, including U.S.N.M. Nos. 110726, 110728-43, and Univ. Mich. Mus. Zool. No. 89370 (13), all topotypes, collected March 22, 1940, by Dyfrig McH. Forbes, Luis, Gilberto, and Gavino García, and H. M. Smith; U.S.N.M. Nos. 46405, 46442, EHT-H.M.S. No. 16241, Las Vigas, Veracruz; Mus. Comp. Zool. No. 45685, Tequeyutepec, Veracruz; and E.H.T.-H.M.S. Nos. 23693-5, 27917-28, 27939-57, near Tezuitlán, Puebla.

Diagnosis.—Like *Toluca l. lineata*, except infralabials generally (94 percent) 6-7 or less; differing from *l. varians* and *l. acuta* in this character and in pattern and number of ventrals and caudals.

Description of holotype.—Rostral protruding, pointed, not turned upward, its length visible from above about equal to its distance from frontal; two internasals, almost as long as prefrontals, not extending so far laterally as latter; frontal hexagonal, with an obtuse angle anteriorly, an acute one posteriorly, sides slightly convergent; length of frontals (3.2 mm.) very slightly less than that of parietals, considerably greater than its distance from tip of snout (2.5 mm.); nasal entire, in contact with preoculars, narrowed posteriorly; pre-

ocular single, large, in contact with second and third supralabials; one postocular; 1-2 temporals (the anterior abnormally fused with penultimate labial on one side); 7-7 supralabials, penultimate largest; 6-6 infralabials, the last elongate and not quite reaching even with posterior margin of last supralabial; two rather large anterior chin shields, in contact with three anterior infralabials; posterior chin shields separated from each other medially, scarcely larger than small gular scales; four small scales from posterior chin shields to the first full-width ventral.

Dorsal scale rows 17-17, with single apical pits, all smooth; ventrals 119; anal divided; subcaudals 38; two subcaudals entire.

Dorsal surface slate-gray; a middorsal series of small, black spots extending from nape onto tail; these spots involving the edges of the paravertebral scale rows, separated from one another by spaces of less than one scale length. Most dorsal scales with dark bases, and scattered, irregular dark streaks over the rest of the surface. Belly whitish, with a very few, small, dark spots on the posterior edges of the ventrals, near their ends; tail whitish, slightly stippled.

Variations.—Most specimens are colored like the type, but a few are reddish instead of gray in ground color. The pattern closely resembles that of *I. lineata*.

The variation of the entire series of 69 specimens examined is as follows: One has 16 scale rows near the anus, all others 17 throughout the body. In 30 females the ventrals vary from 120 to 130, average 126.2 (120, 1; 123, 1; 124, 4; 125, 5; 126, 5; 127, 7; 128, 2; 129, 3; 130, 2); in 39 males they vary from 117 to 126, average 120.9 (117, 3; 118, 4; 119, 5; 120, 9; 121, 5; 122, 3; 123, 2; 124, 3; 125, 3; 126, 2). The caudals vary in 30 females from 25 to 33, average 29.2 (25, 2; 27, 4; 28, 4; 29, 8; 30, 4; 31, 3; 32, 4; 33, 1); in 38 males they vary from 34 to 43, average 38.5 (34, 1; 36, 5; 37, 4; 38, 8; 39, 10; 40, 6; 41, 2; 42, 1; 43, 1). Eighteen specimens have 1 to 21 entire subcaudals; of the 30 females only four specimens have entire subcaudals (1, 1, 3, 6), while of the 39 males, 14 have entire subcaudals (1, three; 2, three; 3, four; 4, one; 5, one; 16, one; 21, one); the latter two are of moderate size, of 219 mm. and 162 mm. total length, respectively; the others are of varying length, from 287 to 106 mm.; with the character there is no obvious linkage with lethal characters. The posterior chin shields are separated in 45 (23 ♂, 22 ♀) in contact medially in 24 (16 ♂, 8 ♀). The number of small gular scales from the posterior chin shields to the first full-sized ventral varies from 3 to 6. The total ventral counts, including three small scales, from chin shields to anal plate, vary from 126 to 136 in females, 122 to 131 in males; the range of variation with this count is not increased over that obtained by excluding the smaller anterior

scales; in females the curve of variation is somewhat more regular (126, 1; 128, 1; 129, 4; 130, 5; 131, 7; 132, 5; 133, 3; 134, 2; 135, 1; 136, 1), but in males it is considerably spread (122, 5; 123, 5; 124, 5; 125, 5; 126, 7; 127, 1; 128, 5; 129, 3; 130, 2; 131, 1); the counts are insufficient for an accurate estimation of significance of differences between total and the typical ventral count.

The supralabials are 7-8 in four, 7-7 in the others. The infralabials are 5-5 in 1 (δ), 6-6 in 47, 6-7 in 17 (11 φ , 6 δ), 7-7 in 4 (3 φ , 1 δ). In all the preoculars are 1-1; the postoculars are normally 2-2, but fused together on one side in 9 (5 φ , 4 δ), on both sides in 7 (4 φ , 3 δ); two specimens have 2-3 postoculars. There are two anterior temporals on both sides in two, on one side in six; the secondary temporals are single on one side of one, triple on one side of one, double in others. The loreals are 0-0 in 28 (8 φ , 20 δ), 0-1 in 13 (7 φ , 6 δ), 1-1 in the remainder. In one the suture between the internasal and prefrontal on one side is incomplete; otherwise the internasals and prefrontals are distinct and separate. On one side of one specimen the prefrontal contacts the labials. The second supralabial contacts the preocular on one side in 10 (5 φ , 5 δ), on both sides in 54, on neither side in 5.

The percent of the total length comprised by the tail length varies from 12.7 to 17.6 in 30 females, and from 17.0 to 22.3 in 39 males.

From *lineata varians*, of an adjacent range, *l. wetmorei* differs as follows:

	<i>l. wetmorei</i>	<i>l. varians</i>
ventrals in φ -----	83 percent 128 or less (25 of 30)	90 percent 129 or more (26 of 29)
caudals in φ -----	83 percent 31 or less (25 of 30)	80 percent 32 or more (21 in 26)
infralabials -----	94 percent 6-7 or less (65 in 69)	90 percent 7-7 or more (57 in 63)

Between these two races there are a number of other differences of considerable significance, but they are of less than 70 percent occurrence. From *l. acuta* there are obvious differences in pattern and in the number of infralabials.

The race with which *l. wetmorei* is to be compared, however, is *l. lineata*. In 64 females and 60 males of the latter, from the states of Guanajuato, Hidalgo, western Mexico, Michoacán, Morelos, Puebla, and San Luis Potosí, the chief difference evident, from *l. wetmorei*, is the number of infralabials. In *l. lineata*, 10 percent have 6-7 infralabials or less while in *l. wetmorei* 94 percent have 6-7 or less. Specimens from eastern Mexico, Distrito Federal, and central western Veracruz (El Limón Totalco, Cruz Blanca, Toxtlacuaya, and between Las Vigas and La Jolla), are intergrades. In 18 specimens from

Cruz Blanca, five have 6-7 or fewer infralabials; two from Toxtla-cuaya, Veracruz, have 7-7 infralabials; these seem typical intergrades. Another series of 35 specimens is from El Limón Totalco, Veracruz; 20 have 6-7 infralabials or less, the remainder 7-7 or 7-8; these are apparently intergrades not only of *l. lineata* and *l. wetmorei*, but also with *l. acuta*, since some specimens have the large dorsal spots of that race. Others (18) from between Las Vigas and La Jolla, Veracruz, are intermediate between *l. wetmorei* and *l. lineata*, with 6-7 or 6-6 infralabials occurring in 12, 7-7 or more in 6. Thirty-three specimens from Distrito Federal and eastern Mexico also appear intermediate between these races; 15 have 67 or fewer infralabials. The area of intergradation of *l. lineata* is therefore of considerable extent, from Distrito Federal east to western Veracruz.

Remarks.—This Veracruzian race is named for Dr. Alexander Wetmore in reference to his studies of the avifauna of that state and in appreciation of the many courtesies extended to my wife and me during my tenure of the Walter Rathbone Bacon Scholarship.

TRIMORPHODON BISCUTATUS BISCUTATUS (Duméril and Bibron)

Trimorphodon biscutatus biscutatus SMITH, Proc. U. S. Nat. Mus., vol. 91, pp. 159-160 (part), 1941.

Seven specimens were secured, one in the state of Chiapas (Tonalá, No. 110409), the others in the state of Oaxaca (Tres Cruces, No. 110403-4; Tehuantepec, Nos. 110405-6; Cerro Guengola, No. 110407; La Concepción, No. 110408).

The Museum has five other specimens, from Tehuantepec, Oaxaca (Nos. 30406, 30427-9), and Santa Efigenia, Oaxaca (No. 46547).

TRIMORPHODON BISCUTATUS SEMIRUTUS, new subspecies

Type.—U. S. N. M. No. 110410, from Acapulco, Guerrero.

Paratypes.—Nine in the EHT-HMS collection, including Nos. 5338-9, El Sabino, Michoacán; Nos. 5145-8, Agua del Obispo, Guerrero; No. 4588, near Organos, Guerrero; No. 21404, La Crucita, Guerrero; and No. 23619, 10 miles north of Tafetán, Michoacán. Also U. M. M. Z. No. 80200, 6 miles northwest of Villa Alvarez, Colima, and No. 80201, Las Orties, Colima.

Diagnosis.—Like *Trimorphodon biscutatus biscutatus*, except ventrals 260 to 275, caudals 85 to 102, total ventral-caudal count 358 to 376, as compared with 251 to 271 ventrals, 81 to 96 caudals, total ventral-caudal counts 343 to 359 of the typical subspecies.

Description of type.—Male: scale rows 23-24-16; ventrals 275; anal divided; caudals 100; supralabials 8-9; infralabials 11-12; preoculars

and postoculars 3-3; loreals 2-2; preocular in contact with frontal; spots on body 20, on tail 13.

Variations.—Twelve specimens of *b. semirutus* from Colima, Michoacán, and Guerrero have a total of 358 to 376 ventrals and caudals (358, 1; 360, 2; 362, 1; 365, 1; 370, 2; 371, 1; 373, 1; 374, 1; 375, 1; 376, 1). Sixteen specimens of *b. biscutatus* from Morelos, Oaxaca, and Chiapas have a total count of 341 to 359 (341, 1; 343, 1; 344, 1; 345, 3; 346, 1; 347, 1; 349, 2; 351, 1; 354, 1; 355, 1; 359, 2). An interlacing of the ranges of the two races in Guerrero and Morelos is indicated by the Morelos specimen (Taylor, 1940, p. 477).

Remarks.—The type was found under an exfoliated slab on the side of a large granite boulder.

*TRIMORPHODON COLLARIS Cope[∞]

A single specimen, the type, is in the Museum; it is labeled "Orizaba," Veracruz; it is actually from Tuxpango, near Orizaba (Sumichrast).

TRIMORPHODON FASCIOLATA Smith

Trimorphodon fasciolata SMITH, Proc. U. S. Nat. Mus., vol. 91, pp. 160-162, 1941.

A single specimen, the type (No. 110400), from Zaráracua, 6 miles southeast of Uruapan, Michoacán, is in the collection. It was found under the bark of a dead tree.

The Museum has no other specimens of the species.

TRIMORPHODON FORBESI Smith

Trimorphodon forbesi SMITH, Proc. U. S. Nat. Mus., vol. 91, pp. 163-165, 1941.

A single specimen is from San Diego, near Tehuacán, Puebla (No. 110402); it is the type.

The Museum has no others specimens of the species.

*TRIMORPHODON LAMBDA Cope

Two Mexican specimens are in the Museum, from Guaymas, Sonora (No. 13487, type),¹ and "Sonora" (No. 56321).

*TRIMORPHODON PAUCIMACULATUS Taylor

A single specimen in the Museum is from San Blas, Nayarit (No. 46618).²

[∞] Cope, 1876, p. 131; Smith, 1941t, pp. 165-166.

¹ Cope, 1886, pp. 286-287; Taylor, 1939b, p. 360, pl. 35, fig. 4.

² Smith, 1941t, p. 155.

**TRIMORPHODON TAU* Cope

A single specimen, the type (No. 30338),³ is in the Museum, labeled "Tehuantepec," but is actually from Quiotepec, Oaxaca, according to Sumichrast.

TRIMORPHODON UPSILON Cope

One specimen was found dead in the road 10 km. north of Jacala, Hidalgo (No. 110401). Scale rows 21-23-16; ventrals 226; caudals 63 (♀); supralabials 8-8; infralabials 12-12; preoculars and postoculars 3-3; loreals 2-3; blotches on body 27, on tail, 14.

The Museum has nine other specimens: "Mexico" (Nos. 9911-2, 25361, 26138-9); Guanajuato (No. 11370); Guadalajara (Nos. 12419, 31358); San Juan Capistrano, Zacatecas (No. 46334).⁴

**TRIMORPHODON VILKINSONII* Cope

A single Mexican specimen, the type (No. 14268),⁵ is in the Museum, from "Chihuahua."

TROPIDODIPSAS SARTORII SARTORII Cope

Three specimens were obtained, one (No. 109909) at Potrero Viejo, Veracruz; another (No. 109908) at Tenosique, Tabasco; and a third (No. 109907) at Emiliano Zapata, Tabasco.

The Museum has only one other specimen of this race, from Chuntuí, Guatemala (No. 71361). Aside from these I have examined another from Potrero Viejo, Veracruz (EHT-HMS No. 21809), and four in the Museum of Comparative Zoology, three of which are from Alvarez, San Luis Potosí (Nos. 25002-4), the other from Tamazunchale, San Luis Potosí (No. 45689). In three specimens of this entire series the loreal enters the orbit on both sides (Nos. 109907, 25002, 25003), and in one specimen it enters the orbit on one side (No. 25004). In one the nasal contacts a lower preocular below the loreal (No. 21809), and in No. 25002 the temporal enters the orbit on one side. Other details of variation are given in table 42. The dorsal scales are feebly keeled in all.

In one Potrero specimen and in the Guatemala specimens the only light band complete about the body is the nuchal collar; the remaining light bands reach the edges of the ventrals and caudals. In the other Potrero specimen (No. 21809) 10 of the 13 body bands are very narrowly interrupted medially. In the Tenosique specimen all the light bands are complete about the body, except one immediately preceding the anus. In the Zapata specimen most of the bands are nar-

³ Cope, 1869, p. 152; Taylor, 1939b, p. 374, fig. 8, pl. 51.

⁴ Taylor, 1939b, p. 366.

⁵ Cope, 1886, pp. 285-286.

TABLE 42.—*Variation in Tropicodipsas sartorii sartorii*

No.	Sex	Ventrals	Caudals	Supralabials	Infralabials	Preoculars	Postoculars	Body bands	Tail bands
25002	♂	176	63	7-7	9-9	1-1	2-2	18	6
71561	♂	185	64	7-7	8-9	2-2	2-2	22	7
109908	♂	180	65	7-7	9-9	2-2	2-?	24	8
109907	♂	184	61	7-7	10-10	2-2	2-2	20	6
25003	♀	180	58	6-6	8-?	1-?	?-?	16	6
25001	♀	179	56	7-7	9-10	3-3	2-2	21	5
45689	♀	176	63	7-7	9-?	2-2	2-2	17	5
109909	♀	182	61	7-7	9-9	2-2	2-2	15	5
21809	♀	183	59	7-7	9-9	3-4	2-2	13	4

rowly interrupted on the midventral surface. All the San Luis Potosí specimens have complete light rings. Some of the dorsal scales in the light bands are black-tipped in all. In all my specimens the nuchal collar was yellow in life, the remaining light bands red.

Eventually it may be possible to discern more than one subspecies in this apparently very variable form. The color variants now known, however, do not segregate very well geographically. A specimen with all the annuli complete is recorded by Boulenger (1894, p. 297) from Orizaba, while mine from Potrero has the entire midventral surface black; Boulenger's specimen probably agrees more closely with the San Luis Potosí specimens. My southern snakes show the bands tending toward completeness ventrally, yet the specimen from Guatemala shows the midventral surface entirely black.

The number of bands seems to be associated with sex. The four females have 15 to 21 body and 5 to 6 caudal bands, while four males have 18 to 22 body and 6 to 8 caudal bands.

TROPIDODIPSAS SARTORII ANNULATUS (Peters)

Two specimens were secured, one (No. 109910) from Finca Juárez, Chiapas, the other from La Esperanza, Chiapas (No. 109911). Both were found at night near trails through the forests.

Two other specimens of this form have been examined, one (No. 46436) from Chicharras, Chiapas, the other (No. 12689) from Escuintla, Guatemala. In these four specimens, the supralabials are 6-7 in two, 7-7 in two; infralabials 8-9 in two, 9-9 in one, 9-10 in one; postoculars 2-2 in all; preoculars 2-2 in two (loreal enters orbit in one of these, passing between preoculars), 1-1 in two; in the two latter, the loreal enters the orbit below the preocular in one, and in the other it enters above the preocular and below a narrow extension of the prefrontals which also enter the orbit. The ventrals are 175, 177,

173, 181, respectively, as listed above; caudals 59♀, 58♀, 64♂, 54♀, respectively. In three females the dark bands are 14 or 15 on the body, 5 or 6 on the tail; in the single male the body bands are 18, tail bands 6. The dorsal scales in the light bands are usually black-tipped (not in No. 109910). All the light bands are light yellow, and complete about the body.

The form differs from typical *sartorii* chiefly in (1) regularity of the bands, and (2) light bands all yellow. In *s. sartorii* the bands are complete or incomplete ventrally, and tend to be somewhat variable, while in *s. annulatus* they are very even and regular. In the latter they are broader than in most *s. sartorii*, and perhaps average less numerous. In *annulatus* all the light bands are yellow, while in *s. sartorii* only the nuchal collar is yellow, the remaining bands red.

I may add here a few notes on another species, *Tropidodipsas philippii*, of which one specimen (M. C. Z. No. 11410) from "Colima" has been examined. It is a male with 15-15-15 scale rows, 181 ventrals, single anal, 85 caudals, 8-8 supralabials (fifth and sixth entering orbit on one side, fourth also on other), 9-9 infralabials, 2-2 preoculars and postoculars, and 1-2 temporals; the prefrontals enter the orbit on both sides, above the preoculars; the loreal does not enter the orbit; total length 519 mm., tail 142 mm. There are feeble but distinct keels on the dorsal scales posteriorly and numerous pits on the scales of the ventral surface of the head. On the body there are about 11 long, dark cross bands narrowly separated from each other by light rings (several broken medially and alternating) covering two or three scale lengths medially, four or five laterally; on the tail there are nine similar black rings. The belly is mostly light, the black rings involving the ends (one-third or one-fourth on each side) of the ventrals. In caudal count this snake broadly overlaps the count of *occidentala*, an obviously related species with 81 caudals; other *philippii* have 67 to 71. Nevertheless, *occidentala* appears to be well differentiated from *philippii* on the basis of ventral color (all black except where light rings cross belly) and the total absence of keels on the dorsal scales.

TYPHLOPS BASIMACULATUS Cope

One specimen (No. 110304) is from Potrero Viejo, Veracruz, collected by Dyfrig McH. Forbes. Dorsals 379; caudals 9; scale rows 18. I follow Taylor in restricting *tenuis* to Guatemala, pending further collections from intermediate territories.

The Museum has three others, from Córdoba and Orizaba, Veracruz (Nos. 6344 [2], 6602).

TYPHLOPS BRAMINUS (Daudin)

One specimen (No. 110510) was collected at Agua del Obispo, Guerrero, under a log shortly after a rainstorm.

The Museum has no others of the species from Mexico.

*TYPHLOPS MICROSTOMUS Cope

Two specimens are in the Museum, both from "Yucatán" (Nos. 6569, 61064, type).⁶

XENODON MEXICANUS Smith

Six specimens are as follows: Piedras Negras, Guatemala (No. 108596, type); Potrero Viejo, Veracruz (No. 110329); La Esperanza, Chiapas (Nos. 110330-2); and Salto de Agua, Chiapas (No. 110333).

The ventrals in this series vary between 126 and 137; caudals 40 to 46; supralabials 8-8 (7-8 in one); infralabials 8-9 in one, 9-9 in two, 10-10 in one; two preoculars on one side in one; three postoculars on one side in one, others with two; crossbars 13-3 (body and tail) in two, 13-4 in one, 14-3 in one, 14-4 in one. The bands are very distinct and complete about the body in the very young.

The Museum has no other Mexican specimens.

CROCODYLIA

CAIMAN FUSCUS (Cope)

Fifteen specimens (Nos. 115337-51) are from the vicinity of Colonia Soconusco, Chiapas, and three others (Nos. 115334-6) are from Belén, Chiapas. They were found in sluggish streams and in ponds by several of the local hunters.

The Museum has no others from Mexico.

CROCODYLUS ACUTUS Cuvier

Two skulls (Nos. 115352-3) were picked up on the beach at Laguna Coyuca, near Acapulco, Guerrero. One small specimen, preserved entire, is from Río Hondo, near San Bartolo (east of Miahuatlán, Oaxaca (No. 115354). The premaxillo-maxillary sutures are produced posteriorly to the level of the posterior border of the seventh tooth in all.

The Museum has one other specimen from Mexico, from Colima (No. 56777); another very small specimen from Tabasco (No. 6624) may belong to the same species.

⁶ Cope, 1866, p. 125.

CROCODYLUS MORELETHI Duméril

Seven specimens are from the following localities: CHIAPAS: Palenque (Nos. 115358-60). TABASCO: Tenosique (Nos. 115356-7). VERACRUZ: Maguey, near Tampico (No. 115361). GUATEMALA: Río Usumacinta, near Piedras Negras, Petén (No. 115355).

The Museum has no other specimens from Mexico.

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